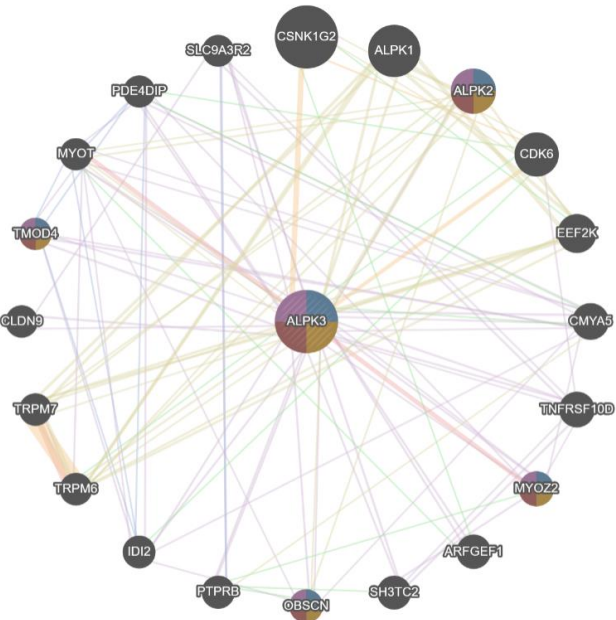


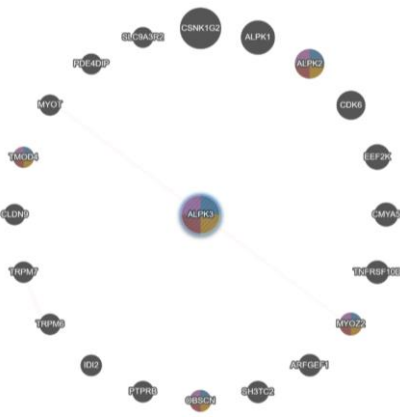
GEN ALPK3 - Alfa kinasa 3

Ubicación celular: Núcleo / banda M del sarcómero

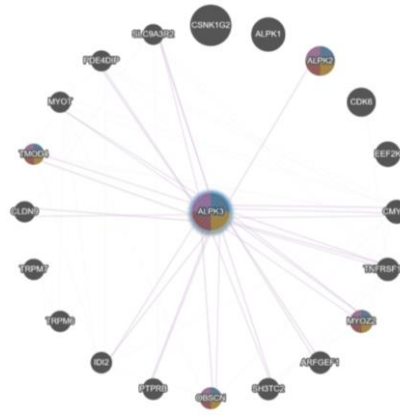


Networks	
☒ Physical Interactions	77.64%
☒ Co-expression	8.01%
☒ Predicted	5.37%
☒ Co-localization	3.63%
☒ Genetic Interactions	2.87%
☒ Pathway	1.88%
☒ Shared protein domains	0.60%

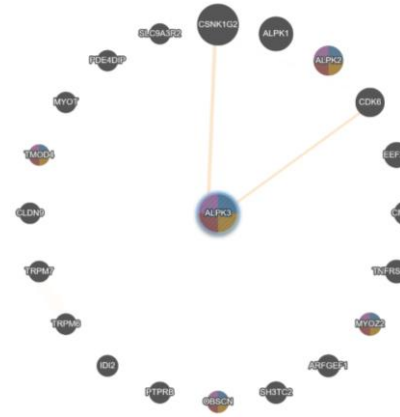
RED DE INTERACCIÓN



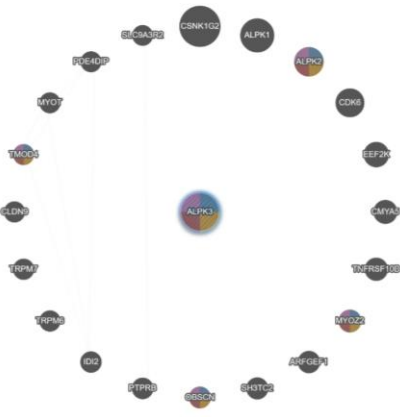
No presenta interacción física con los genes: predichos



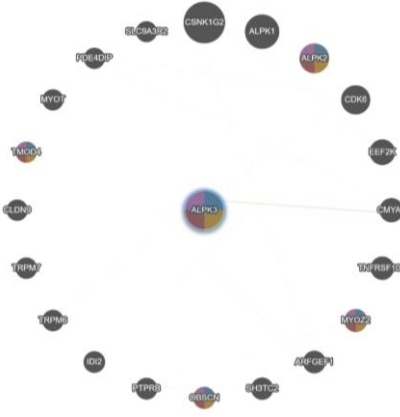
Presenta Co-Expresión con los genes: ALPK2, CMYA5, TNFRSF10D, MYOZ2, ARFGEF1, SH3TC2, OBSCN, PTPRB, IDI2, CLDN9, TMOD4, MYOT, PDE4DIP, SLC9A3R2



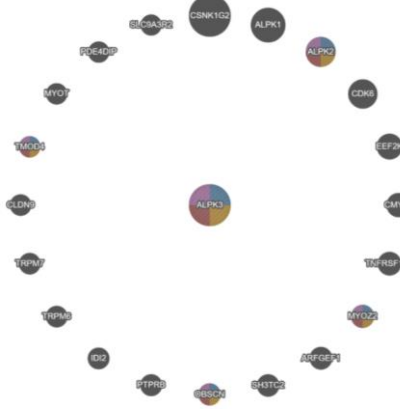
Presenta interacción predicha con los genes: SCNK1G2, CDK6



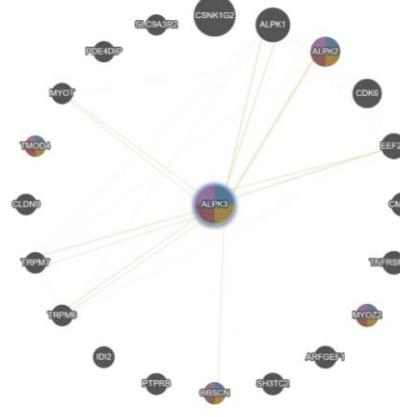
No presenta Co-localización con los genes: predichos



Presenta interacción genética con el gen: CMYA5



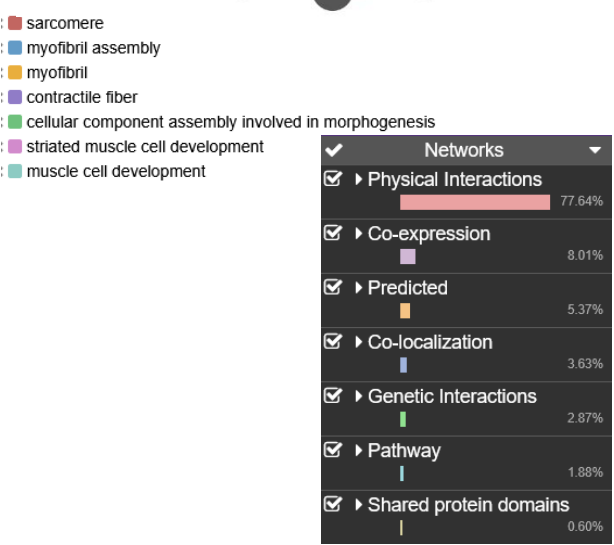
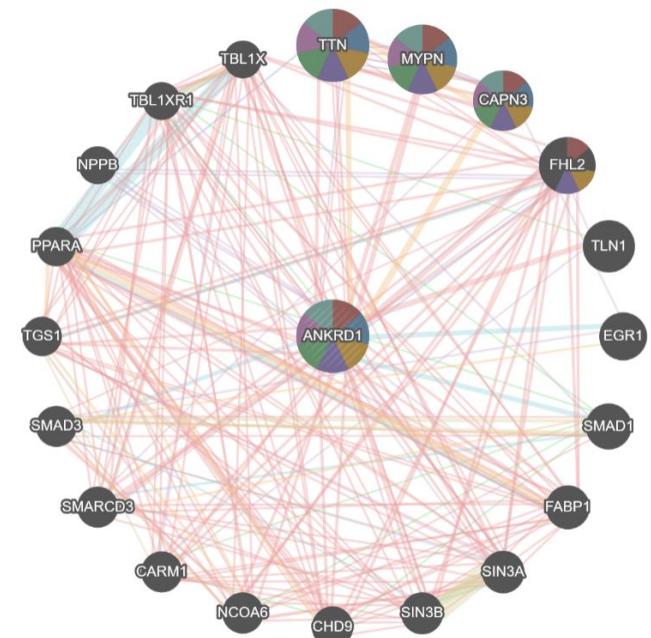
No presenta interacción de rutas biológicas con los genes predichos



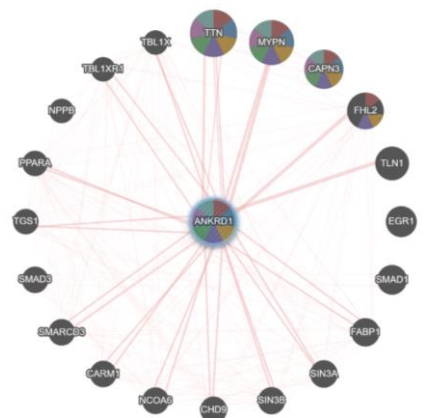
Comparte dominios proteicos con los genes: ALPK1, ALPK2, EEF2K, OBSCN, TRPM6, TRPM7, MYOT

GEN ANKRD1 - proteína de repetición de anquirina cardíaca
CARP

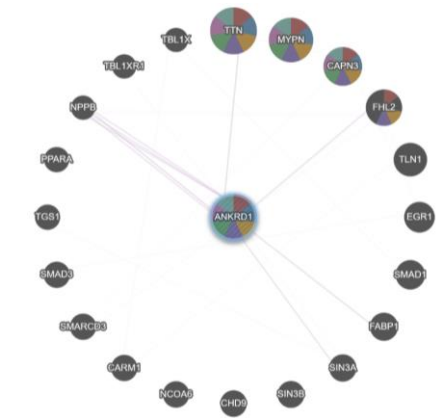
Ubicación celular: sarcómero



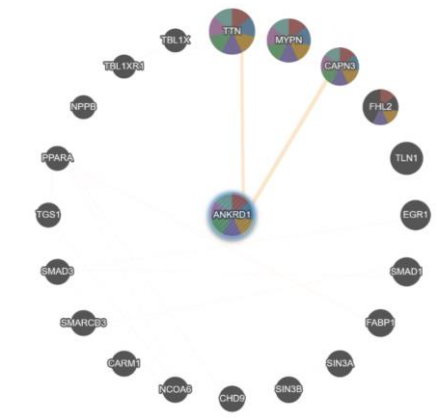
RED DE INTERACCIÓN



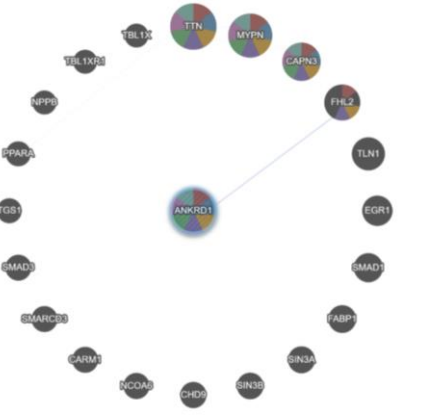
Presenta interacción física con los genes: TTN, MYPN, CAPN3, FHL2, TLN1, FABP1, SIN3A, SIN3B, CHD9, NCOA6, CARM1, SMARCD3, SMAD3, TGS1, PPARA, TBL1XR1, TBL1X



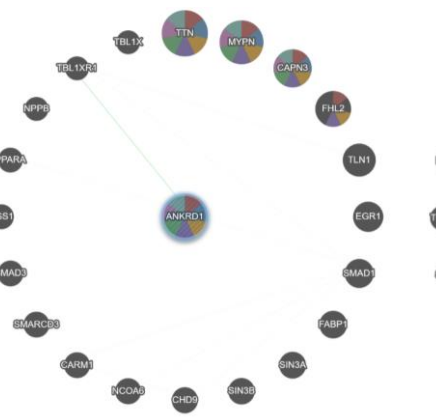
Presenta Co-Expresión con los genes: TTN, MYPN, CAPN3, FHL2, FABP1, SIN3A, NPPB



Presenta interacción predicha con los genes: TTN, CAPN3



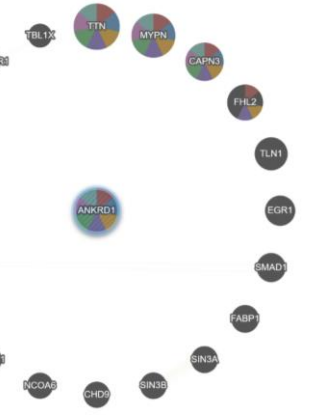
Presenta Co-localización con el gen: FHL2



Presenta interacción genética con el gen: TBL1XR1



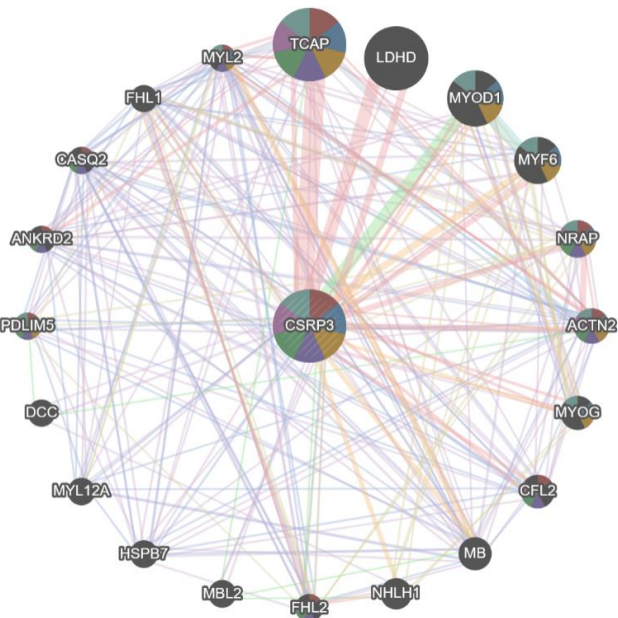
Presenta interacción de rutas biológicas con los genes: EGR1, SMAD1, SMAD3



No comparte dominios proteicos con los genes predichos

GEN CSRP3 - Proteína LIM
muscular

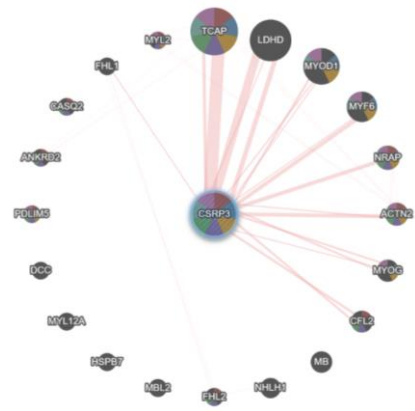
Ubicación celular: Disco Z;Banda I
/ Sarcómero



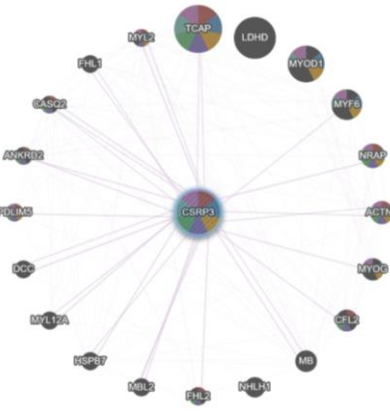
- myofibril
- striated muscle cell development
- muscle cell development
- contractile fiber
- sarcomere
- striated muscle cell differentiation
- muscle cell differentiation

Networks	
☒ Physical Interactions	77.64%
☒ Co-expression	8.01%
☒ Predicted	5.37%
☒ Co-localization	3.63%
☒ Genetic Interactions	2.87%
☒ Pathway	1.88%
☒ Shared protein domains	0.60%

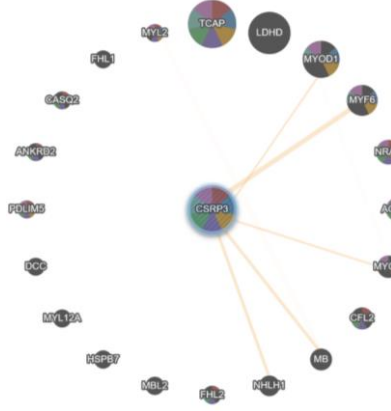
RED DE INTERACCIÓN



Presenta interacción física con los genes:
TCAP, LDHD, MYOD1, MYF6, NRAP, ACTN2,
MYOG, CFL2 y FHL1.



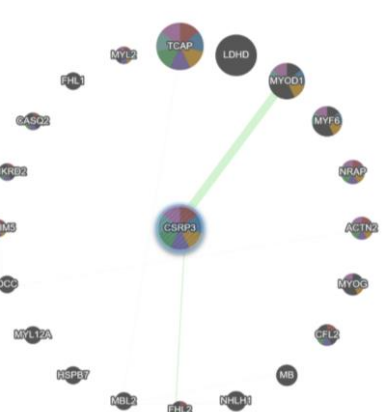
Presenta Co-Expresión con los genes: TCAP,
MYF6, NRAP, ACTN2, MYOG, CFL2, MB,
FHL2, MBL2, HSPB7, MYL12A, DCC, PDLIM5,
ANKRD2, CASQ2, FHL1, MYL2



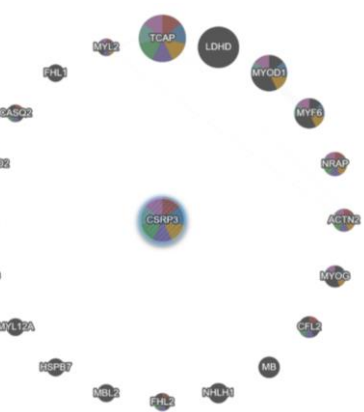
Presenta interacción predicha con los
genes: MYOD1, MYF6, MYOG, MB, NHLH1



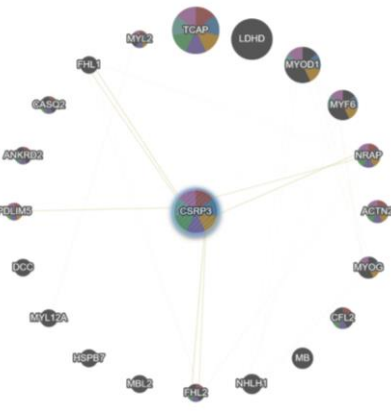
Presenta Co-localización con los genes: ACTN2, CFL2, MB,
FHL2, HSPB7, MYL12A, PDLIM5, ANKRD2, CASQ2, MYL2



Presenta interacción genética con los genes:
MYOD1, FHL2



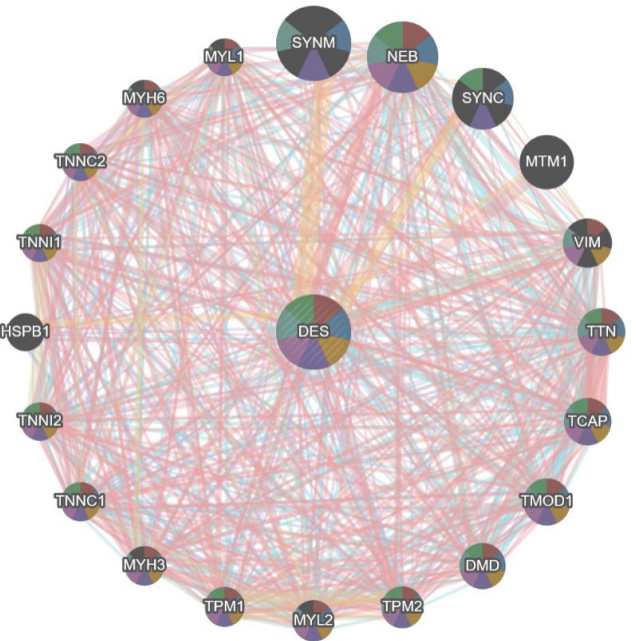
No presenta interacción de rutas biológicas
con los genes predichos



Comparte dominios proteicos con los genes:
NRAP, FHL2, PDLIM5, FHL1

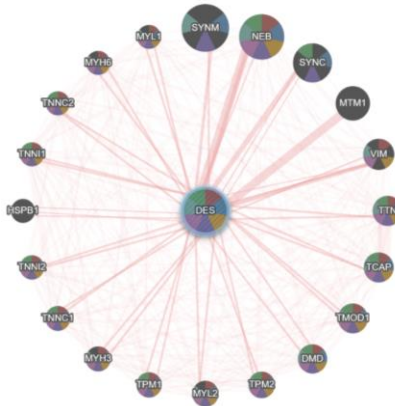
GEN DES - Desmina

Ubicación celular: Disco Z/ Sarcómero



✓	Networks	
✓	Physical Interactions	77.64%
✓	Co-expression	8.01%
✓	Predicted	5.37%
✓	Co-localization	3.63%
✓	Genetic Interactions	2.87%
✓	Pathway	1.88%
✓	Shared protein domains	0.60%

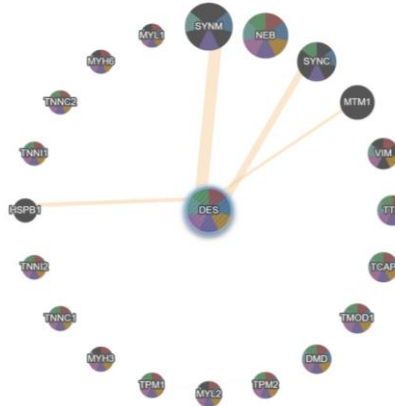
RED DE INTERACCIÓN



Presenta interacción física con todos los genes predichos



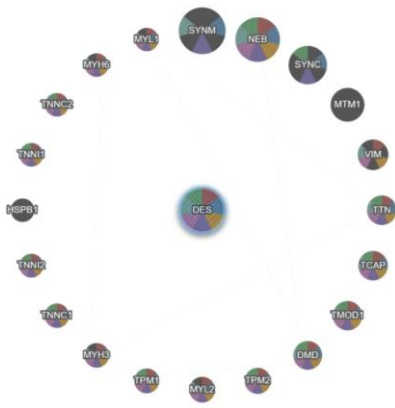
Presenta Co-Expresión todos los genes a excepción de MTM1, VIM y HSPB1



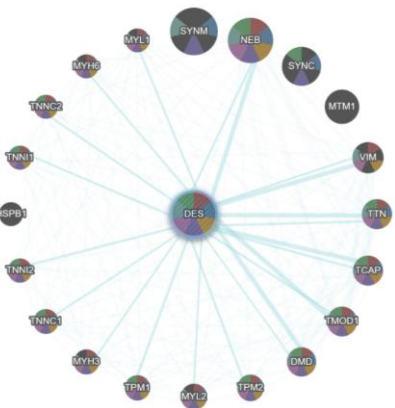
Presenta interacción predicha con los genes: SYMN, SYNC, MTM1, y HSPB1



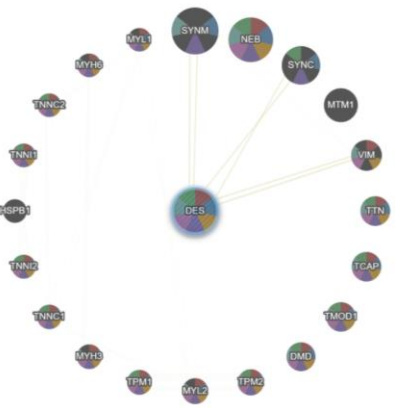
Presenta Co-localización con los genes: TMOD1, DMD, TPM2, MYL2, TPM1, MYH3, TNNC1, HSPB1



No presenta interacción genética con los genes predichos



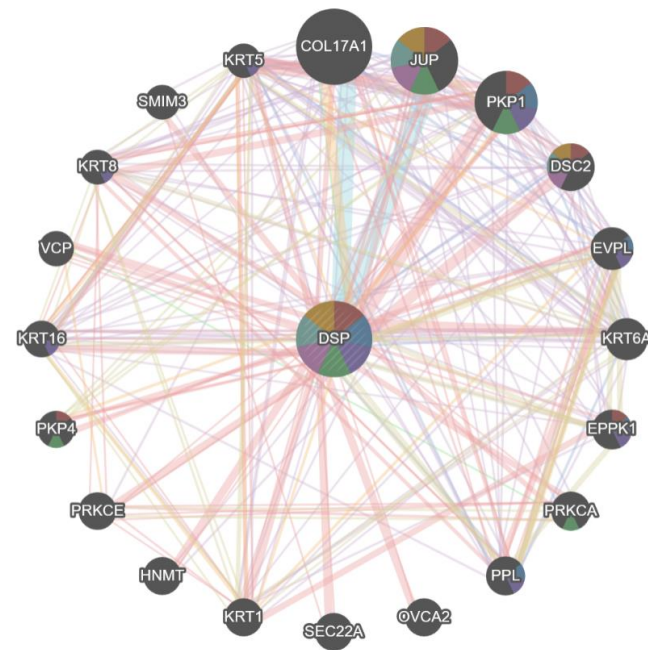
Presenta interacción de rutas biológicas con todos los genes predichos, a excepción de SYMN, SYNC, MTM1, HSPB1



Comparte dominios proteicos con los genes: SYMN, SYNC, VIM

GEN DSP - Desmoplaquina

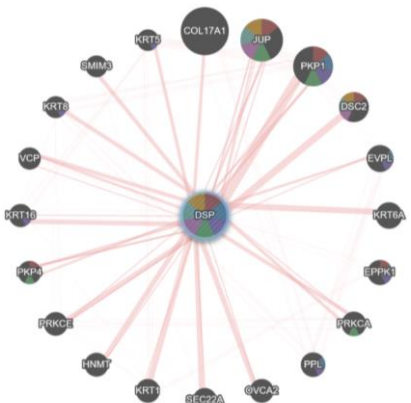
Ubicación celular: Desmosomas



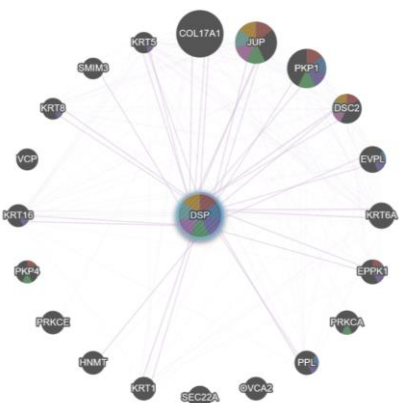
- cell-cell junction
- intermediate filament-based process
- intermediate filament cytoskeleton
- cell-cell junction organization
- ventricular cardiac muscle cell action potential
- regulation of cardiac muscle cell contraction
- cell-cell adhesion mediator activity

✓	Networks	
✓	Physical Interactions	77.64%
✓	Co-expression	8.01%
✓	Predicted	5.37%
✓	Co-localization	3.63%
✓	Genetic Interactions	2.87%
✓	Pathway	1.88%
✓	Shared protein domains	0.60%

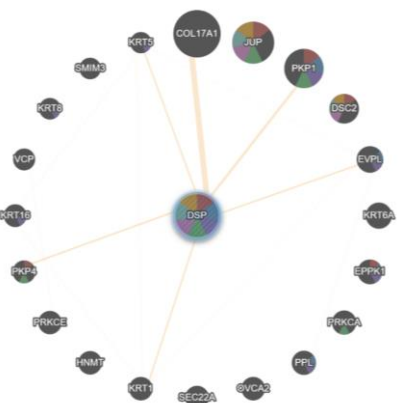
RED DE INTERACCIÓN



Presenta interacción física con todos los genes a excepción de EPPK1, PP



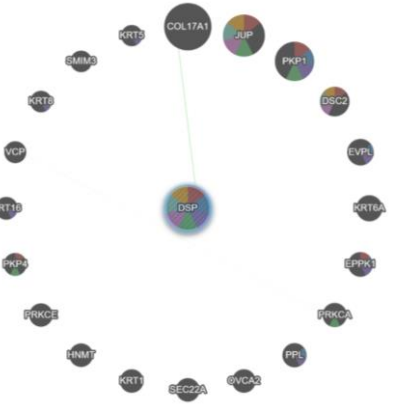
Presenta Co-Expresión todos los genes a excepción de PRKCA, OVCA2, SEC22A, PRKCE, PKP4, VCP.



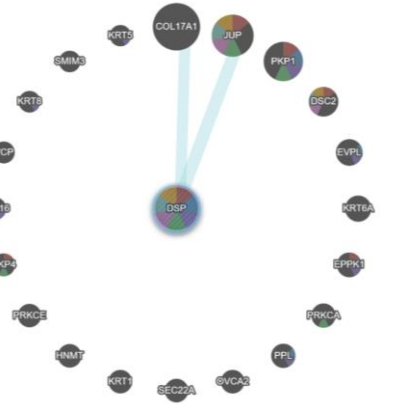
Presenta interacción predicha con los genes: COL17A1, PKP1, EVPL, KRT1, PKP4, KRT5



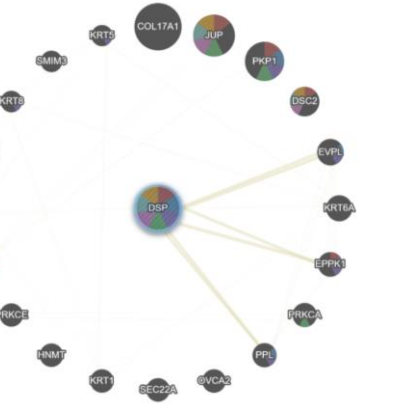
Presenta Co-localización con los genes: DSC2, KRT6A, PPL



Presenta interacción genética con el gen COL17A1



Presenta interacción de rutas biológicas con los genes COL17A1 y JUP

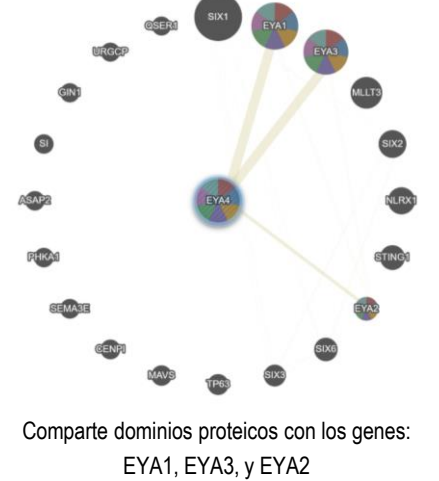


Comparte dominios proteicos con los genes: EVPL, EPPK1, PPL

Ubicación celular: Citoplasma / Núcleo

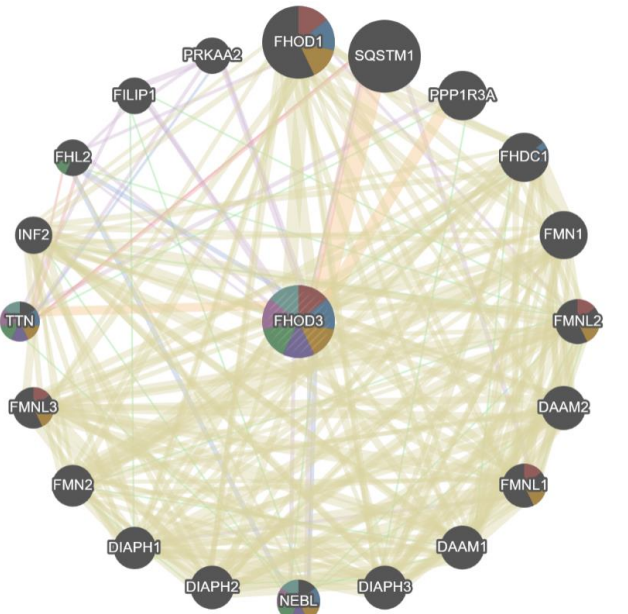


Presenta interacción predicha con los genes: SIX1, MLLT3, SIX2, NLRX1, STING1, SIX6, SIX3, MAVS



GEN FHOD3 - Proteína que contiene el dominio formina de homología 2, tipo 3

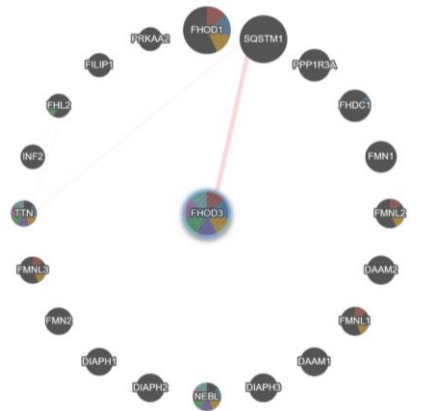
Ubicación celular: Citoplasma / Núcleo



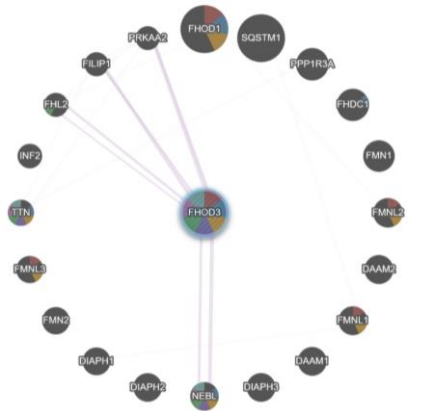
- cortical cytoskeleton organization
- actomyosin structure organization
- actin binding
- cardiac muscle cell development
- sarcomere
- cardiac cell development
- myofibril assembly

✓	Networks	
✓	Physical Interactions	77.64%
✓	Co-expression	8.01%
✓	Predicted	5.37%
✓	Co-localization	3.63%
✓	Genetic Interactions	2.87%
✓	Pathway	1.88%
✓	Shared protein domains	0.60%

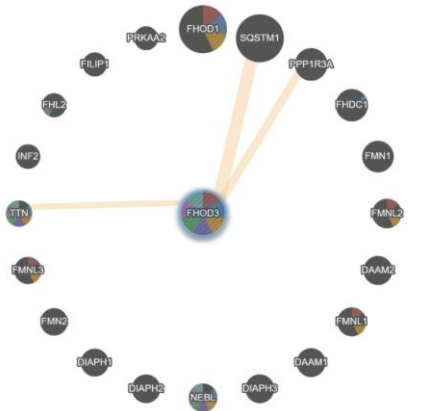
RED DE INTERACCIÓN



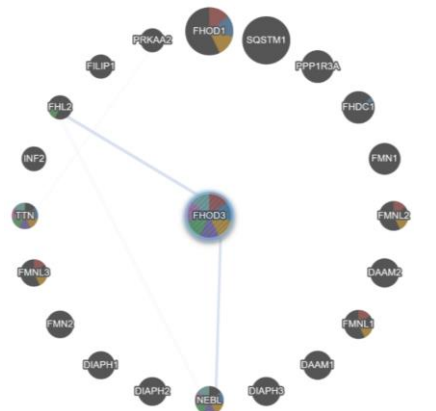
Presenta interacción física con el gen SQSTM1



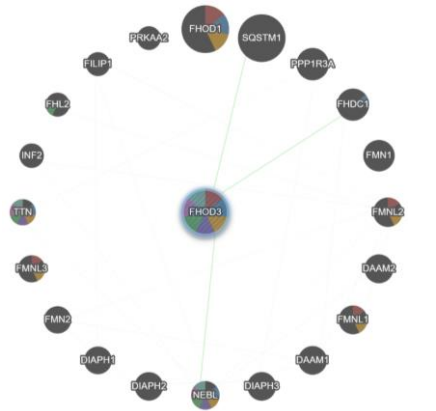
Presenta Co-Expresión con los genes NEBL, FHL2, FILIP1 y PRKAA2



Presenta interacción predicha con los genes: SQSTM1, PPP1R3A y TTN



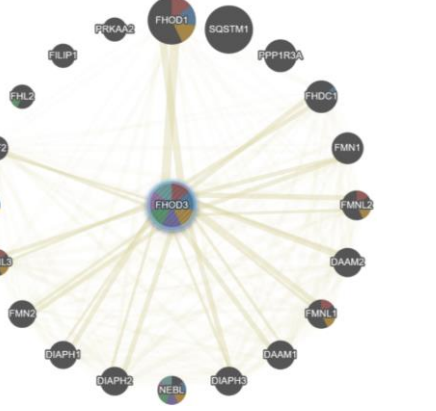
Presenta Co-localización con los genes: NEBL y FHL2



Presenta interacción genética con el gen SQSTM1, FHDC1 y NEBL



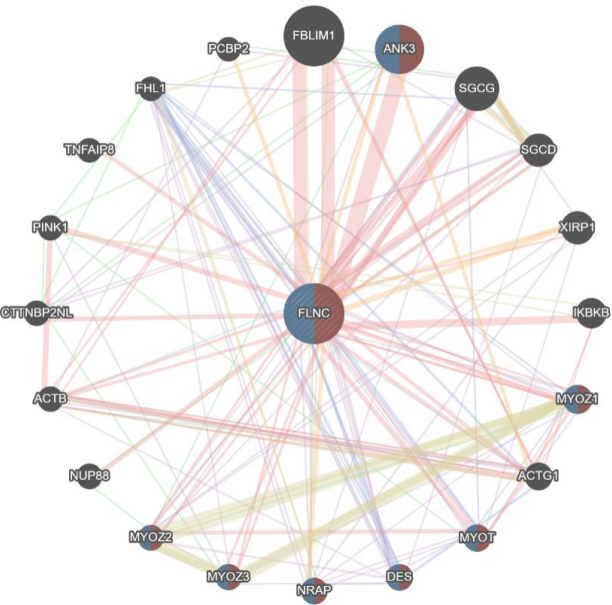
No presenta interacción de rutas biológicas con los genes predichos



Comparte dominios proteicos con los genes, FHOD1, FHDC1, FMN1, FMNL2, DAAM2, FMNL1, DAAM1, DIAPH3, DIAPH2, DIAPH1, FMN2, FMNL3, INF2.

GEN FLNC - Filamina C

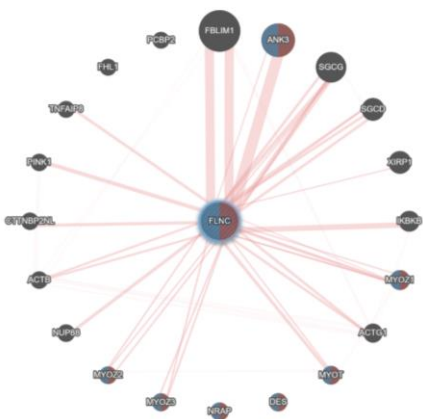
Ubicación celular: Disco Z / Sarcolema / unión miotendinosa / discos intercalados.



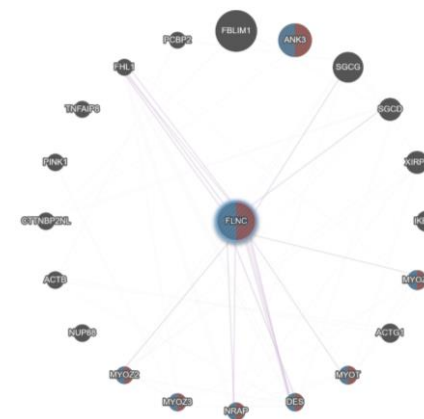
myofibril
contractile fiber

✓	Networks	
✓	Physical Interactions	77.64%
✓	Co-expression	8.01%
✓	Predicted	5.37%
✓	Co-localization	3.63%
✓	Genetic Interactions	2.87%
✓	Pathway	1.88%
✓	Shared protein domains	0.60%

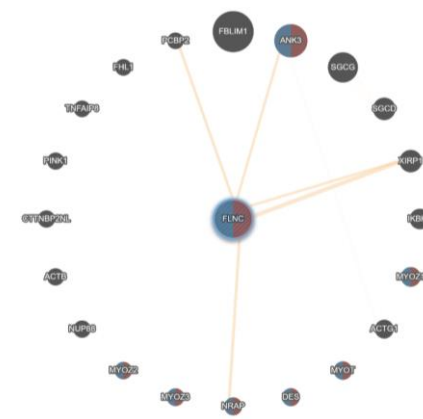
RED DE INTERACCIÓN



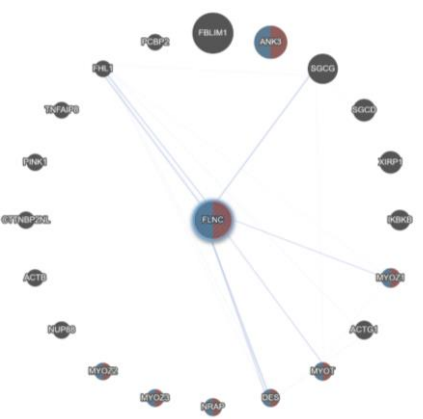
Presenta interacción física con todos los genes, excepto DES, NRAP, FHL1 y PCBP2



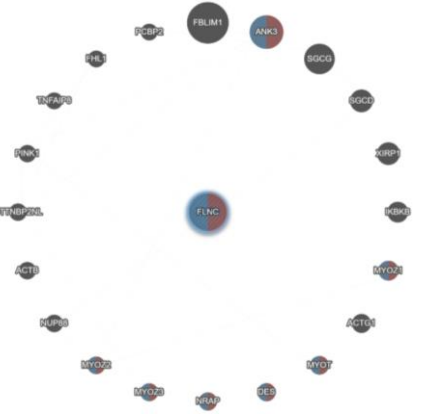
Presenta Co-Expresión con los genes SGCG, SGCD, MYOZ1, MYOT, DES, NRAP, MYOZ3, MYOZ2, y FHL1



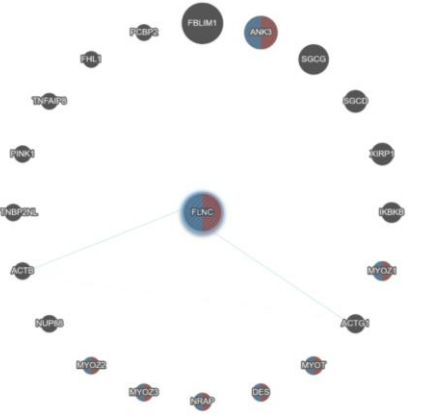
Presenta interacción predicha con los genes: ANK3, CIRP1, NRAP, y PCBP2



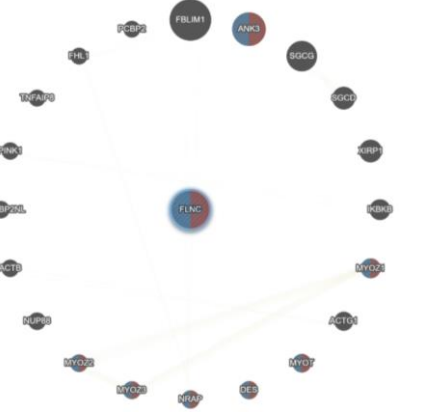
Presenta Co-localización con los genes: SGCG, MYOZ1, MYOT, DES y FHL1



No presenta interacción genética con los genes predichos



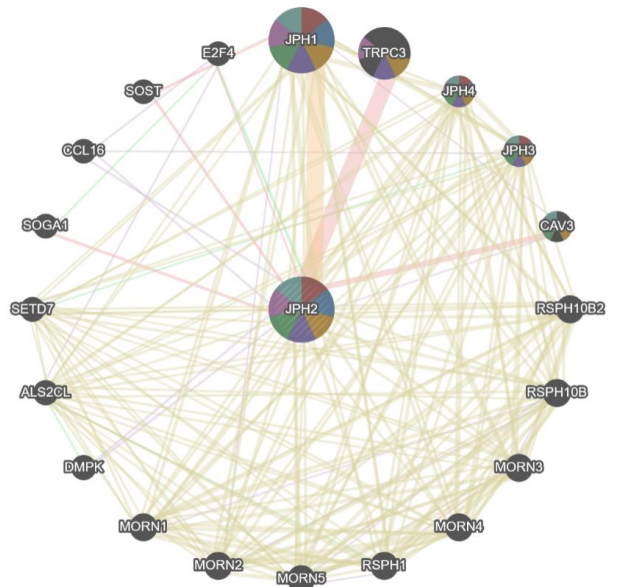
Presenta interacción de rutas biológicas con los genes: ACTG1 y ACTB



No comparte dominios proteicos con los genes predichos

GEN JPH2 - Junctofilina 2

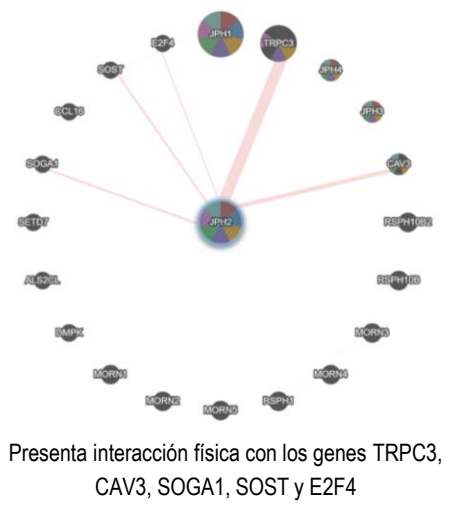
Ubicación celular: Túbulos transversales / membrana del retículo sarcoplásmico.



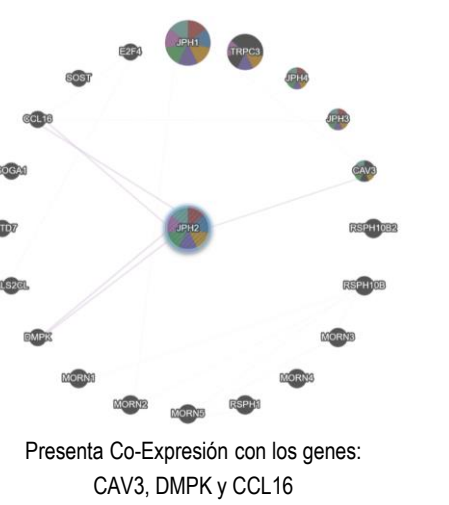
- sarcoplasmic reticulum membrane
- sarcoplasm
- regulation of calcium ion transport
- regulation of calcium ion transport into cytosol
- regulation of calcium ion transmembrane transport
- calcium ion transport
- regulation of ion transmembrane transporter activity

✓	Networks	
✓	Physical Interactions	77.64%
✓	Co-expression	8.01%
✓	Predicted	5.37%
✓	Co-localization	3.63%
✓	Genetic Interactions	2.87%
✓	Pathway	1.88%
✓	Shared protein domains	0.60%

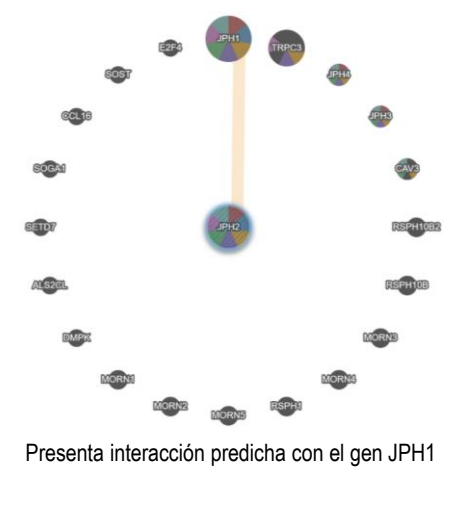
RED DE INTERACCIÓN



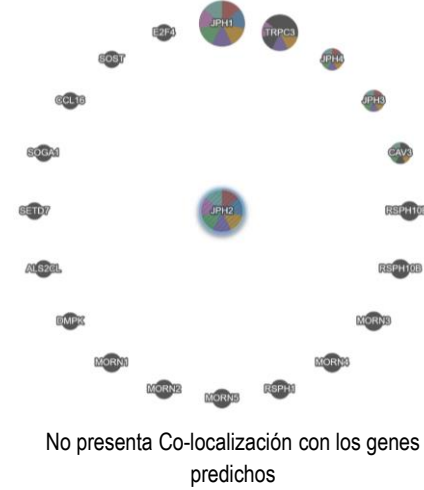
Presenta interacción física con los genes TRPC3, CAV3, SOGA1, SOST y E2F4



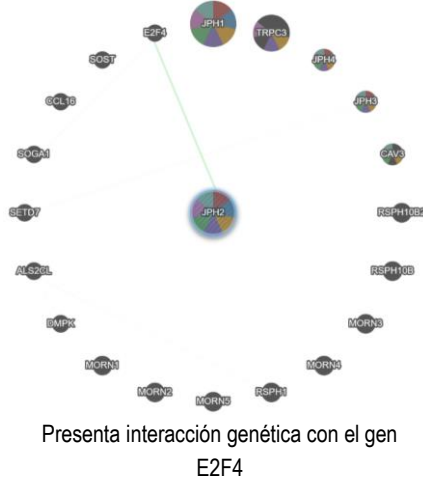
Presenta Co-Expresión con los genes: CAV3, DMPK y CCL16



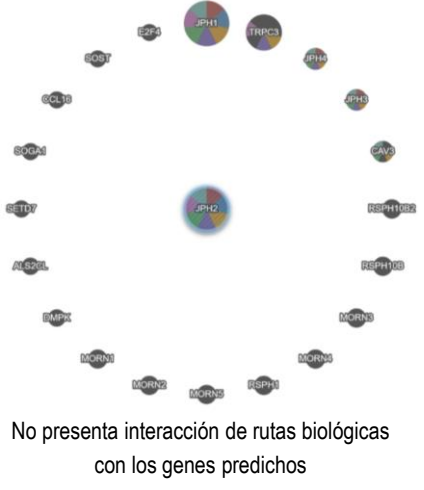
Presenta interacción predicha con el gen JPH1



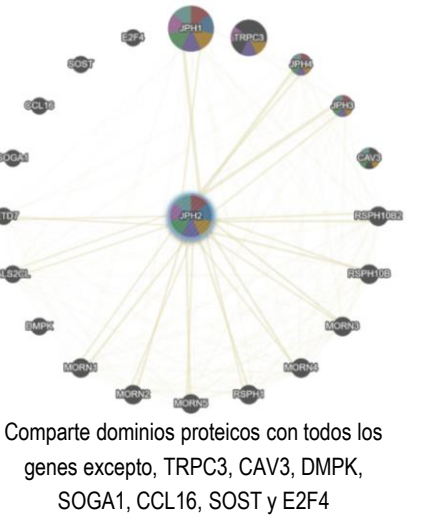
No presenta Co-localización con los genes predichos



Presenta interacción genética con el gen E2F4



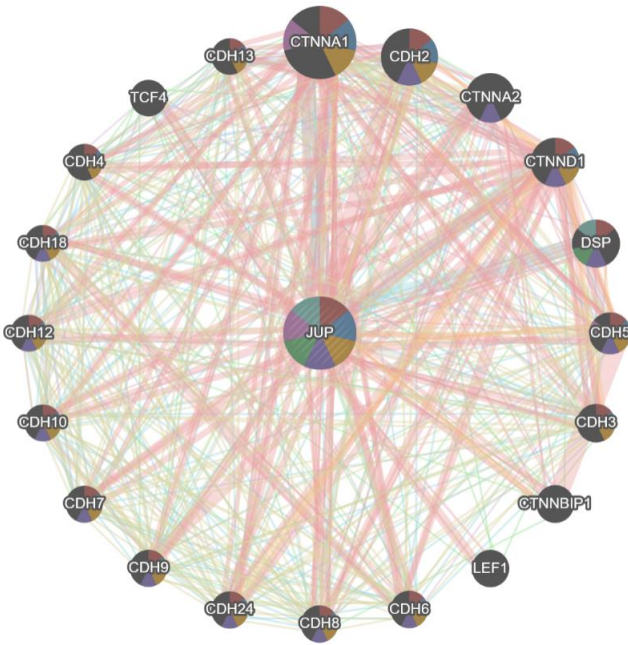
No presenta interacción de rutas biológicas con los genes predichos



Comparte dominios proteicos con todos los genes excepto, TRPC3, CAV3, DMPK, SOGA1, CCL16, SOST y E2F4

GEN JUP - Placoglobina de unión

Ubicación celular: Desmosomas



cell-cell junction organization

extrinsic component of plasma membrane

extrinsic component of membrane

cell-cell junction

bundle of His cell to Purkinje myocyte communication

cell-cell junction assembly

ventricular cardiac muscle cell action potential

Networks

Physical Interactions

77.64%

Co-expression

8.01%

Predicted

5.37%

Co-localization

3.63%

Genetic Interactions

2.87%

Pathway

1.88%

Shared protein domains

0.60%

RED DE INTERACCIÓN

Presenta interacción física con todos los genes predichos

Presenta Co-Expresión con los genes: CTNNA1, DSP, CDH3, CDH6, TCF4

Presenta interacción predicha con los genes CTNNA1, CDH2, CTNND1, CDH5, CTNNBIP1

Presenta Co-localización con el gen CTNNA1

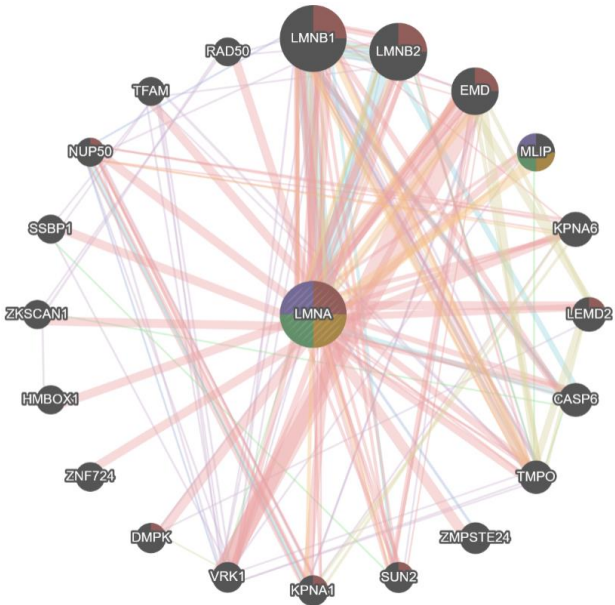
Presenta interacción genética con los genes CDH9 y TCF4

Presenta interacción de rutas biológicas con los genes: CTNNA1, CTNNA2 CTNND1, DSP, CDH3

Comparte dominios proteicos con el gen CTNND1

GEN LMNA - Lámina A/C

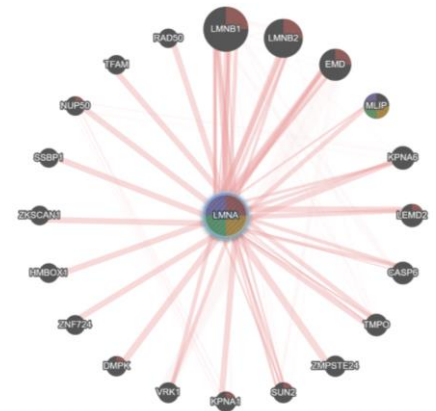
Ubicación celular: Núcleo



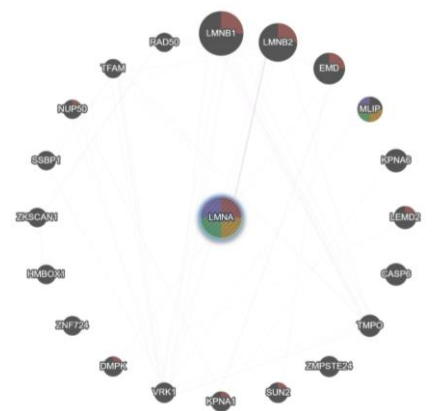
- nuclear envelope
- muscle hypertrophy in response to stress
- cardiac muscle adaptation
- negative regulation of muscle hypertrophy

✓	Networks	
✓	Physical Interactions	77.64%
✓	Co-expression	8.01%
✓	Predicted	5.37%
✓	Co-localization	3.63%
✓	Genetic Interactions	2.87%
✓	Pathway	1.88%
✓	Shared protein domains	0.60%

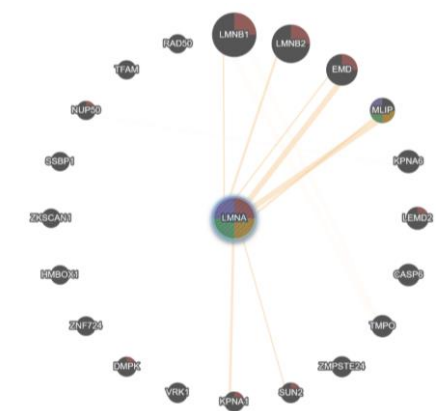
RED DE INTERACCIÓN



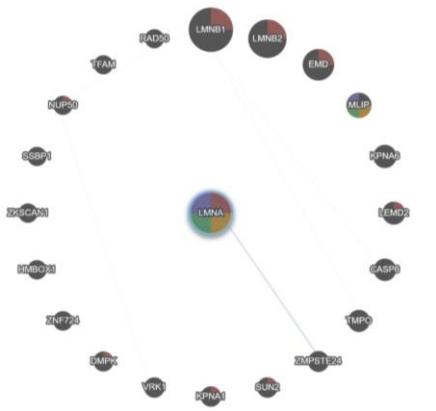
Presenta interacción física con todos los genes predichos



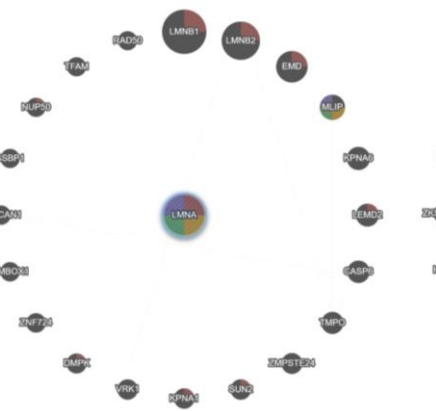
Presenta Co-Expresión con el gen LMNB2



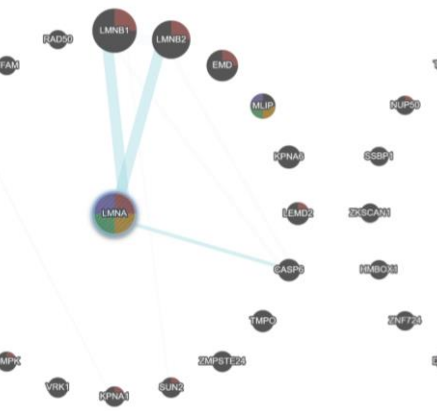
Presenta interacción predicha con los genes LMNB1, LMNB2, EMD, MLIP, SUN2, KPNA1



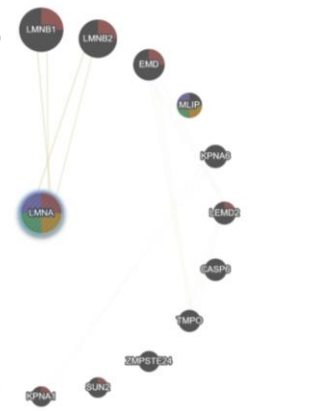
Presenta Co-localización con el gen ZMPSTE24



No presenta interacción genética con los genes predichos



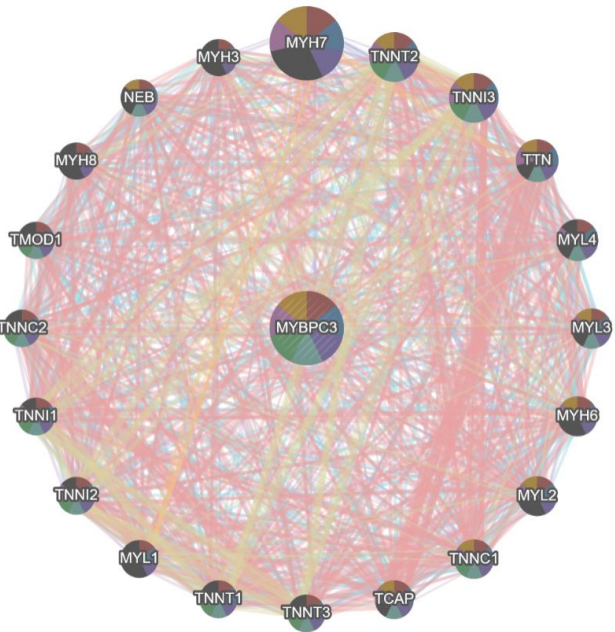
Presenta interacción de rutas biológicas con los gene: LMNB1, LMNB2, CASP6



Comparte dominios proteicos con los genes: LMNB1, LMNB2

GEN MYBPC3 - Proteína a C3 de unión a miosina, tipo cardiaca

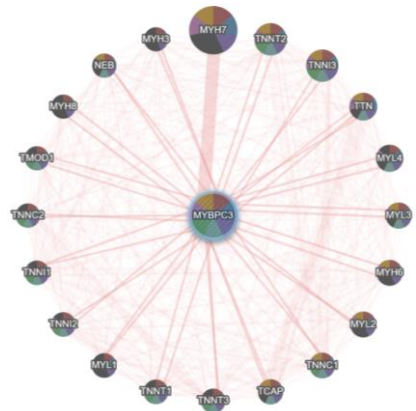
Ubicación celular: Sarcómero



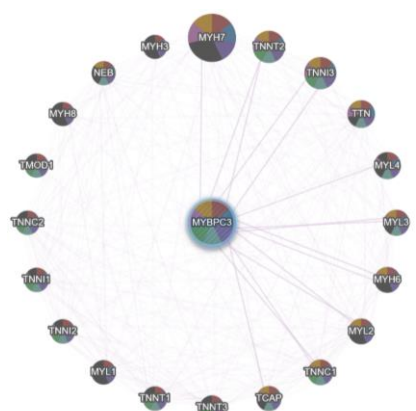
- actin-myosin filament sliding
- actin-mediated cell contraction
- muscle contraction
- sarcomere
- myofilament
- heart contraction
- striated muscle tissue development

Networks	
☒ Physical Interactions	77.64%
☒ Co-expression	8.01%
☒ Predicted	5.37%
☒ Co-localization	3.63%
☒ Genetic Interactions	2.87%
☒ Pathway	1.88%
☒ Shared protein domains	0.60%

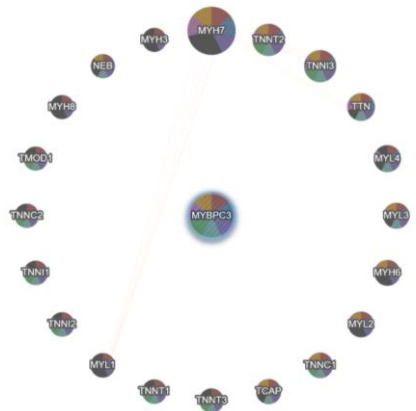
RED DE INTERACCIÓN



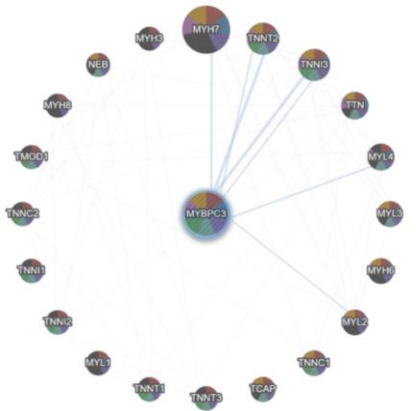
Presenta interacción física con todos los genes predichos



Presenta Co-Expresión con los genes MYH7, TNNT2, TNNI3, MYL4, MYL3, MYH6, MYL2, TNNC1, TCAP



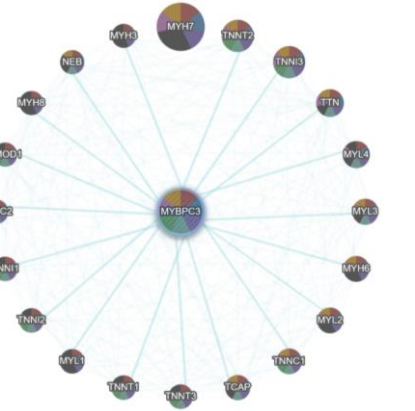
No presenta interacción predicha con ninguno de los genes



Presenta Co-localización con los genes MYH7, TNNT2, TNNI3, MYL4, MYL2



Presenta interacción genética con los genes: MYH7, TNNT2, TNNI3, MYL4, MYL2



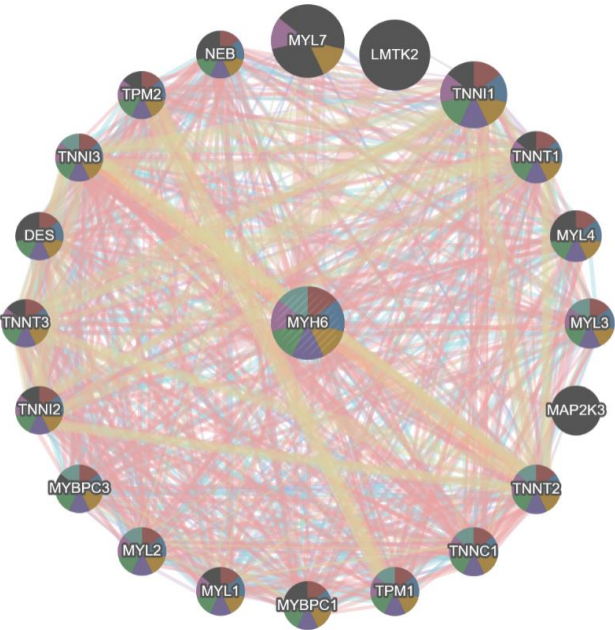
Presenta interacción de rutas biológicas con todos los genes predichos a excepción de MYH7



Comparte dominios proteicos con el gen TTN

GEN MYH6 - Cadena pesada alfa de miosina 6

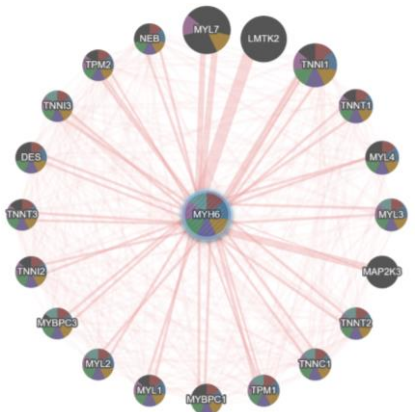
Ubicación celular: Sarcómero



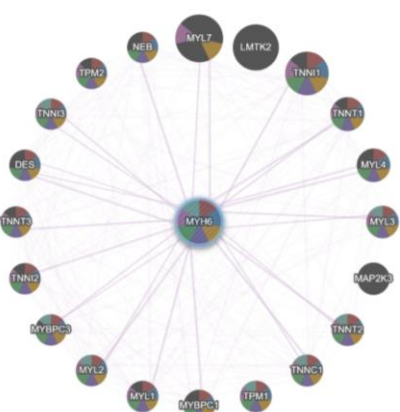
- actin-myosin filament sliding
- actin-mediated cell contraction
- contractile fiber
- actin filament-based movement
- muscle contraction
- actin cytoskeleton
- cardiac ventricle development

✓	Networks	
✓	Physical Interactions	77.64%
✓	Co-expression	8.01%
✓	Predicted	5.37%
✓	Co-localization	3.63%
✓	Genetic Interactions	2.87%
✓	Pathway	1.88%
✓	Shared protein domains	0.60%

RED DE INTERACCIÓN



Presenta interacción física con todos los genes predichos



Presenta Co-Expresión con todos los genes excepto LMTK2, MAP2K3, TPM1, TPM2



No presenta interacción predicha con ninguno de los genes



No presenta Co-localización con los genes predichos



No presenta interacción genética con los genes predichos



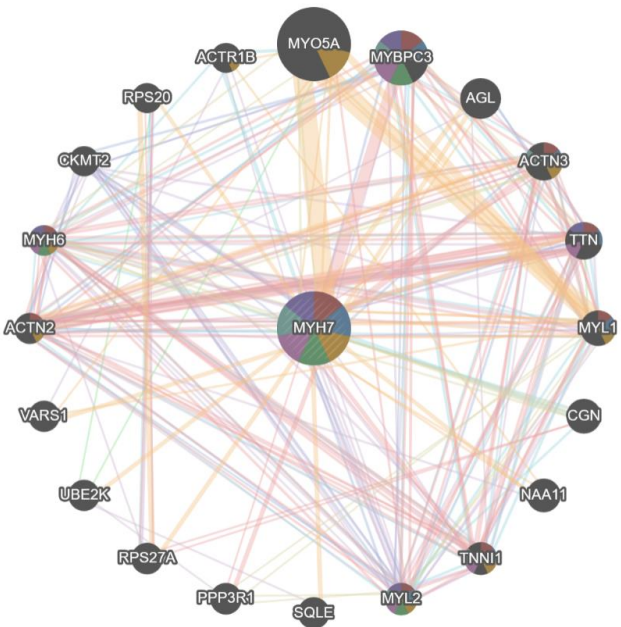
Presenta interacción de rutas biológicas con todos los genes excepto MYL2, LMTK2, MP2K3



No comparte dominios proteicos con los genes predichos

GEN MYH7 - Cadena pesada beta de miosina 7

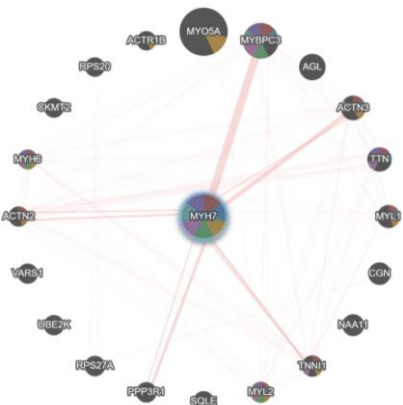
Ubicación celular: Sarcómero



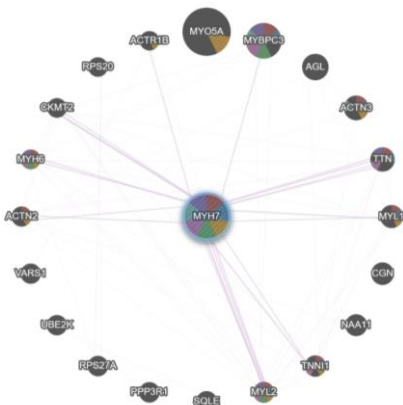
- actin-myosin filament sliding
- actin-mediated cell contraction
- actin cytoskeleton
- cardiac muscle tissue morphogenesis
- heart contraction
- regulation of muscle contraction
- heart morphogenesis

✓	Networks	
✓	Physical Interactions	77.64%
✓	Co-expression	8.01%
✓	Predicted	5.37%
✓	Co-localization	3.63%
✓	Genetic Interactions	2.87%
✓	Pathway	1.88%
✓	Shared protein domains	0.60%

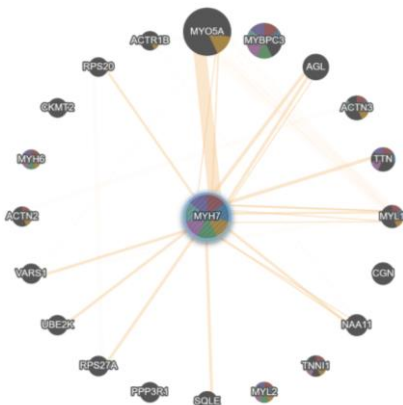
RED DE INTERACCIÓN



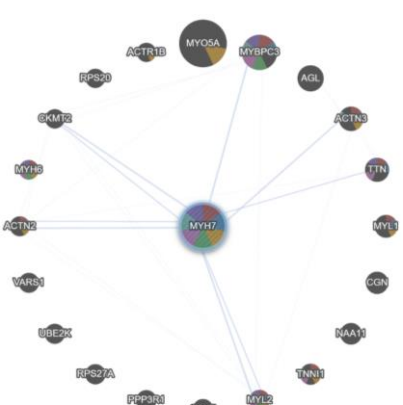
Presenta interacción física con los genes: MYBPC3, ACTN3, TNN1, PPP3R1, ACTN2



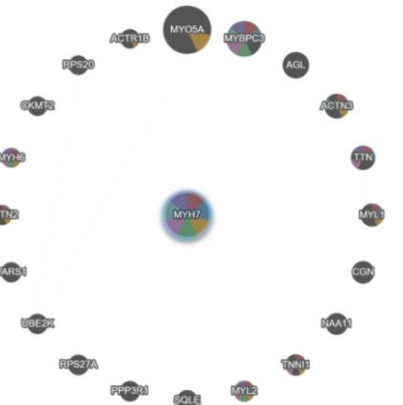
Presenta Co-Expresión con los genes: MYBPC3, TTN, TNN1, MYL2, ACTN2, MYH6, CKMT2, ACTR1B



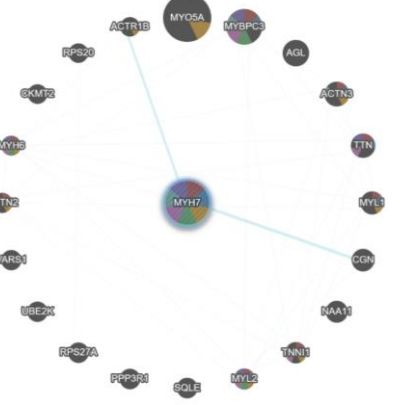
Presenta interacción predicha con los genes: MYO5A, AGL, TTN, MYL1, NAA1, SQLE, RPS27A, UBE2K, VARS1, RPS20



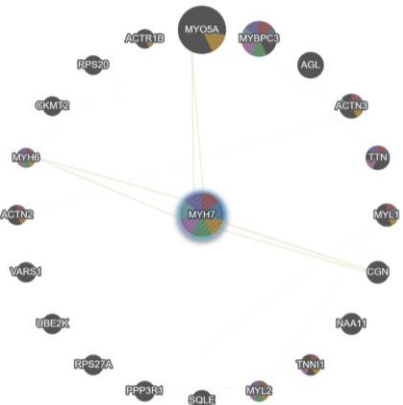
Presenta Co-localización con los genes: MYBPC3, ACTN3, MYL2, ACTN2, CKMT2



No presenta interacción genética con los genes predichos



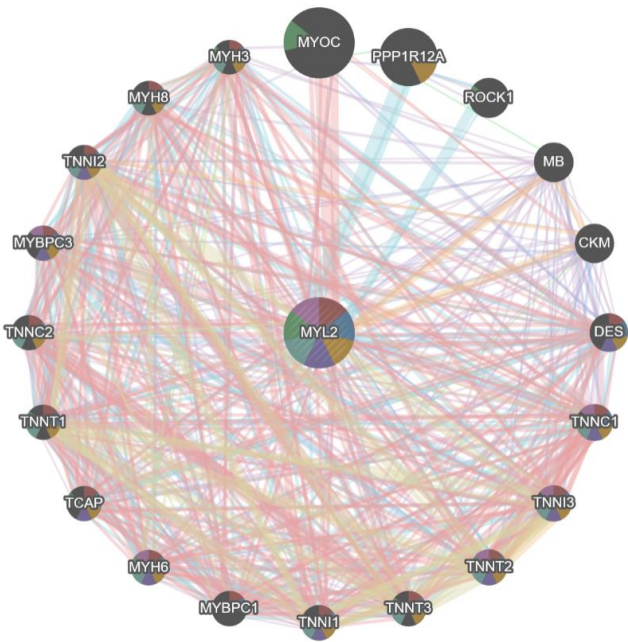
Presenta interacción de rutas biológicas con los genes: CGN, ACTR1B.



Comparte dominios proteicos con los genes: MYO5A, CGN, MYH6

GEN MYL2 - Cadena ligera de miosina 2

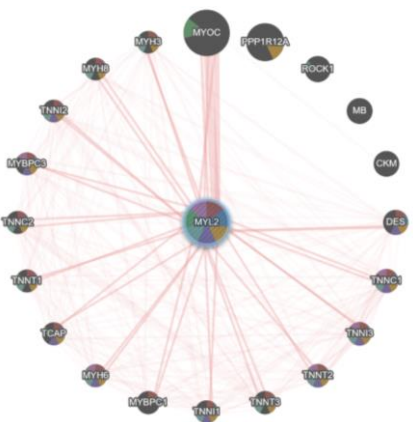
Ubicación celular: Sarcómero



- actin-myosin filament sliding
- actin-mediated cell contraction
- myofibril
- heart contraction
- actin cytoskeleton
- actomyosin structure organization
- cardiac muscle tissue morphogenesis

Networks	
☒ Physical Interactions	77.64%
☒ Co-expression	8.01%
☒ Predicted	5.37%
☒ Co-localization	3.63%
☒ Genetic Interactions	2.87%
☒ Pathway	1.88%
☒ Shared protein domains	0.60%

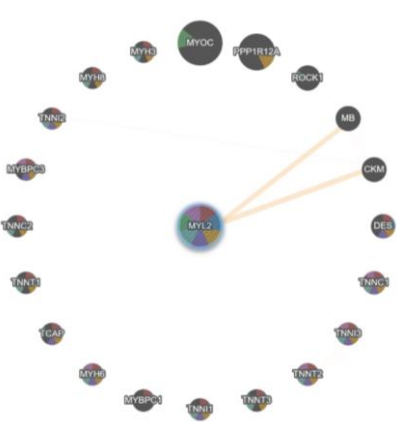
RED DE INTERACCIÓN



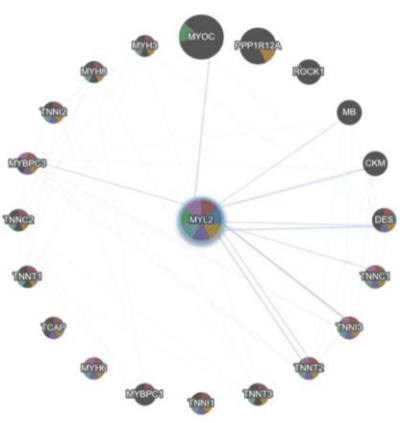
Presenta interacción física con todos los genes excepto PPP1R12A, ROCK1, MB, CKM



Presenta Co-Expresión con todos los genes excepto MYOC, PPP1R12A, ROCK1



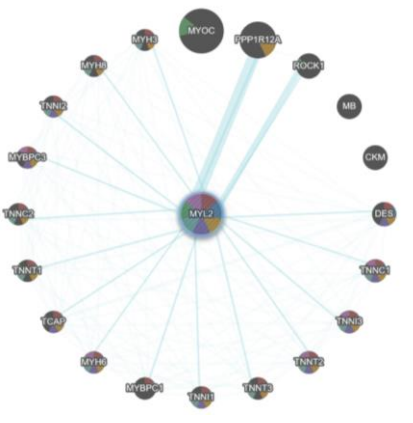
Presenta interacción predicha con los genes: MB y CKM



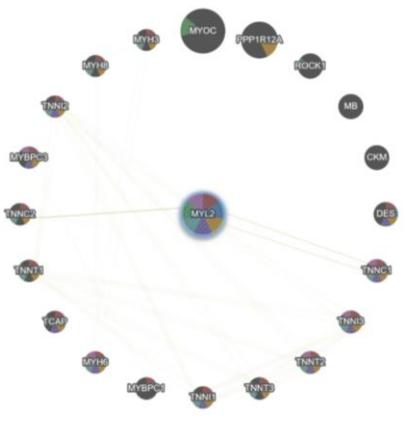
Presenta Co-localización con los genes: MYBPC3, ACTN3, MYL2, ACTN2, CKMT2



No presenta interacción genética con los genes predichos



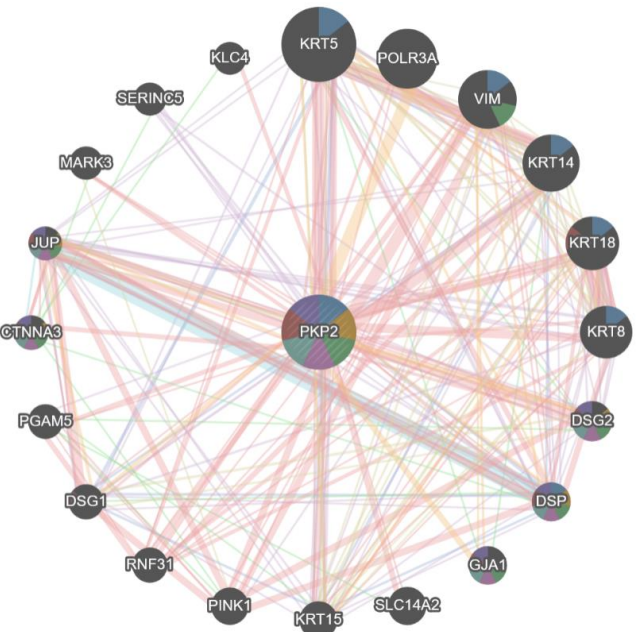
Presenta interacción de rutas biológicas con los genes: CGN, ACTR1B.



Comparte dominios proteicos con los genes: MYO5A, CGN, MYH6

GEN PKP2 - Placofilina 2

Ubicación celular: Desmosomas



intermediate filament cytoskeleton

bundle of His cell to Purkinje myocyte communication

actin-mediated cell contraction

cell communication involved in cardiac conduction

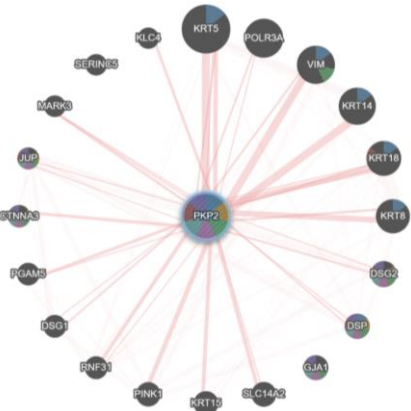
cardiac muscle cell action potential

cell-cell junction

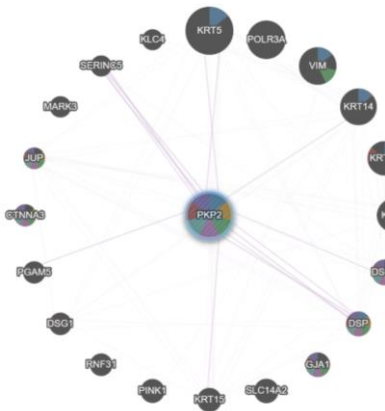
cardiac conduction

Networks	
☒ Physical Interactions	77.64%
☒ Co-expression	8.01%
☒ Predicted	5.37%
☒ Co-localization	3.63%
☒ Genetic Interactions	2.87%
☒ Pathway	1.88%
☒ Shared protein domains	0.60%

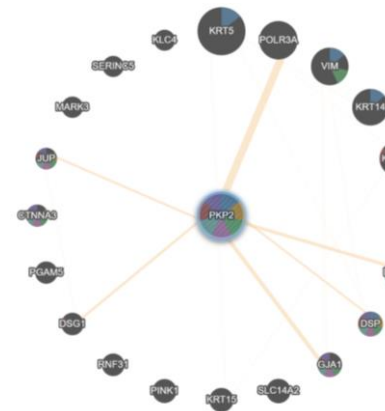
RED DE INTERACCIÓN



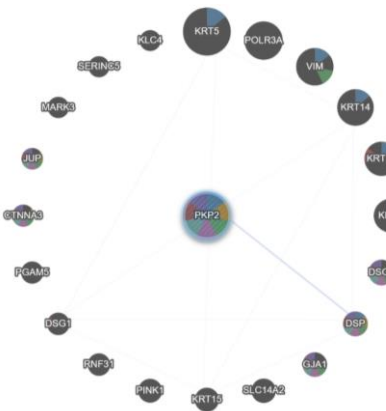
Presenta interacción física con todos los genes excepto GJA1, SERINC5



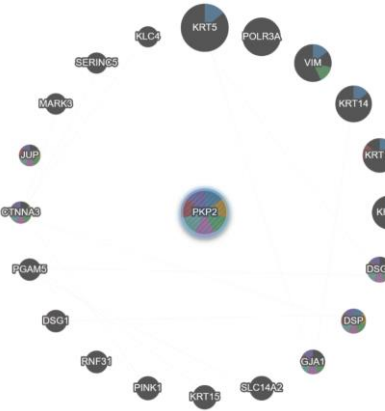
Presenta Co-Expresión con los genes KRT5, KRT14, DSG2, DSP, KRT15, PGAM5, SERINC5



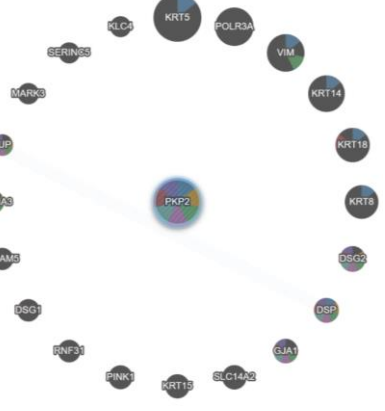
Presenta interacción predicha con los genes: POLR3A, DSG2, GJA1, DSG1, JUP



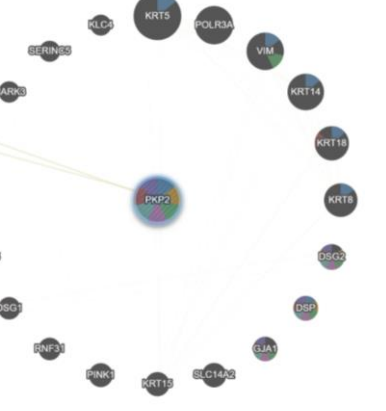
Presenta Co-localización con el gen DSP



No presenta interacción genética con los genes predichos

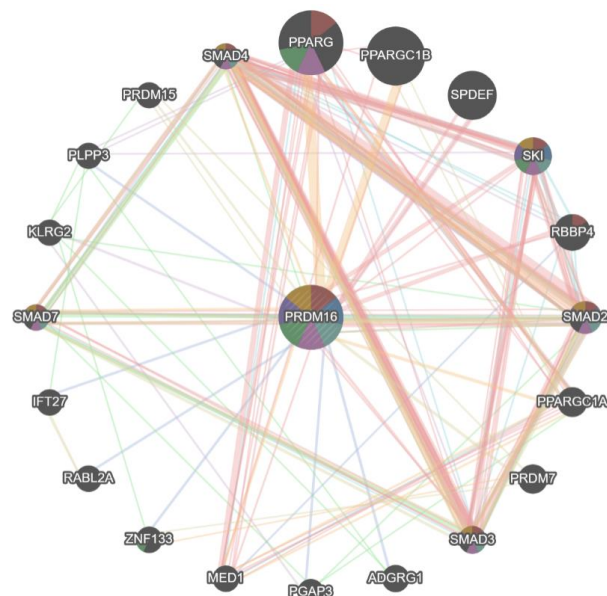


No presenta interacción de rutas biológicas con los genes predichos



Comparte dominios proteicos con el gen JUP

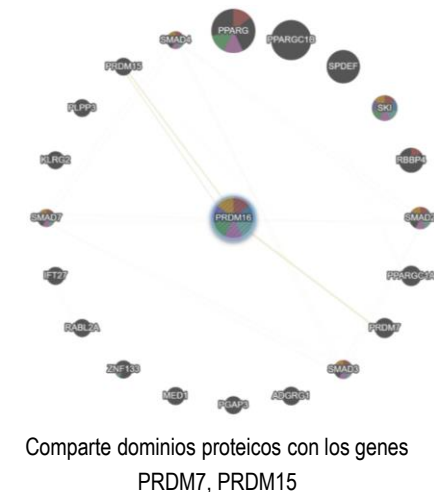
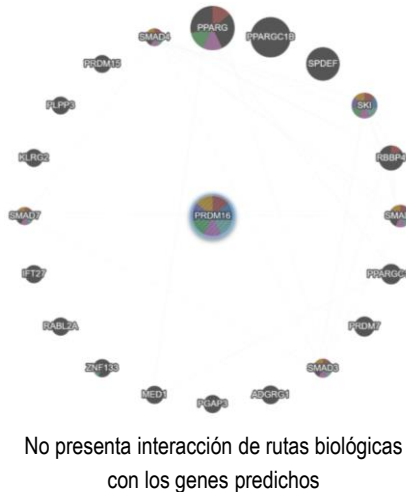
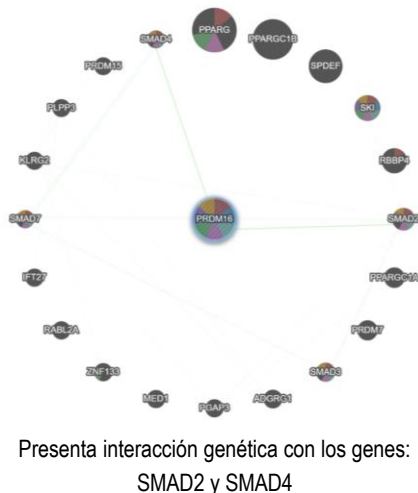
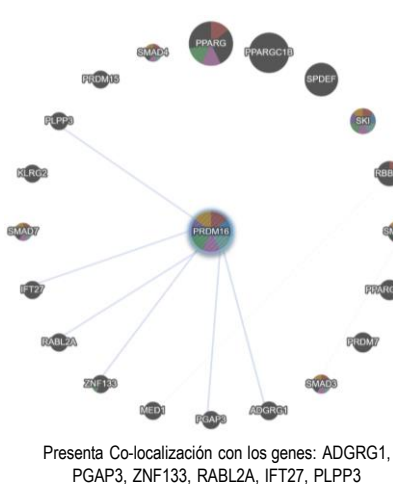
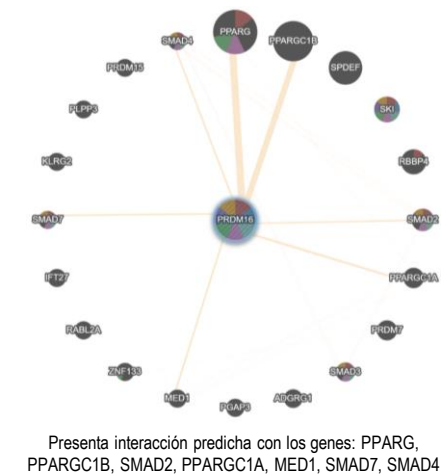
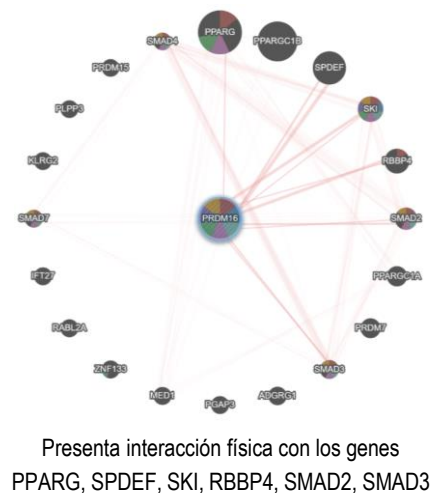
Ubicación celular: Núcleo



- transcription regulator complex
- regulation of transforming growth factor beta receptor signaling pathway
- cellular response to transforming growth factor beta stimulus
- regulation of transmembrane receptor protein serine/threonine kinase signaling pathway
- DNA-binding transcription repressor activity
- regulation of cellular response to transforming growth factor beta stimulus
- response to transforming growth factor beta

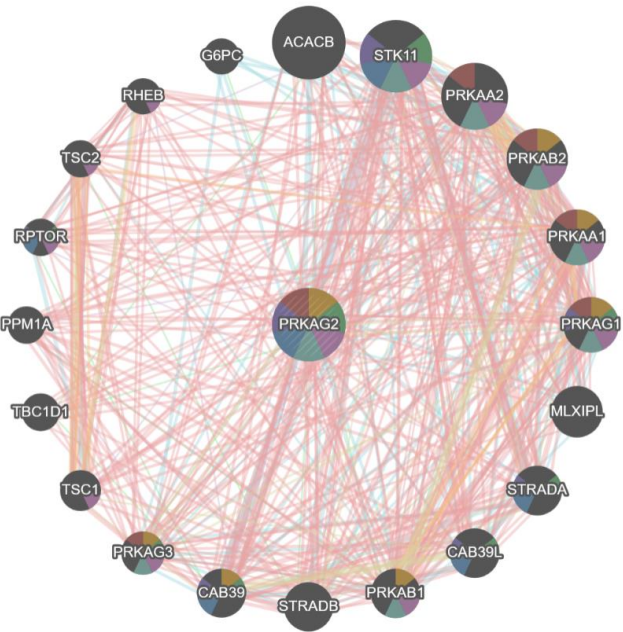
Networks	
☒ ▶ Physical Interactions	77.64%
☒ ▶ Co-expression	8.01%
☒ ▶ Predicted	5.37%
☒ ▶ Co-localization	3.63%
☒ ▶ Genetic Interactions	2.87%
☒ ▶ Pathway	1.88%
☒ ▶ Shared protein domains	0.60%

RED DE INTERACCIÓN



GEN PRKAG2 - Subunidad gamma 2
no catalítica activada por AMP de
proteína quinasa

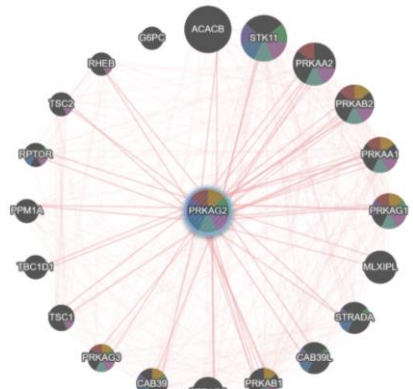
Ubicación celular: Citoplasma / Núcleo



- protein kinase complex
- kinase regulator activity
- regulation of autophagy
- signal transduction by p53 class mediator
- kinase activator activity
- protein kinase regulator activity
- protein serine/threonine kinase activity

Networks	
☒ Physical Interactions	77.64%
☒ Co-expression	8.01%
☒ Predicted	5.37%
☒ Co-localization	3.63%
☒ Genetic Interactions	2.87%
☒ Pathway	1.88%
☒ Shared protein domains	0.60%

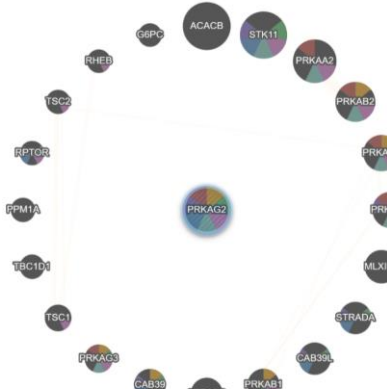
RED DE INTERACCIÓN



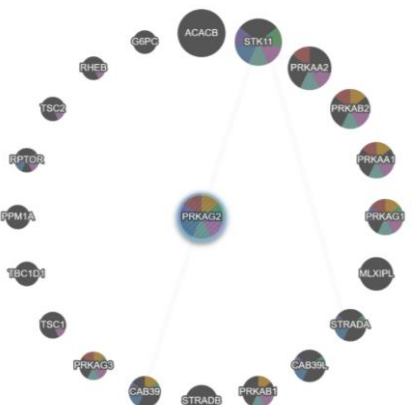
Presenta interacción física con todos los genes, excepto G6PC



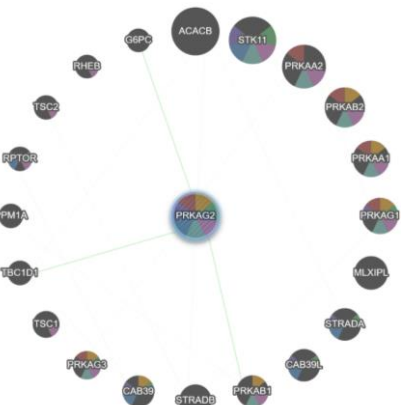
No presenta Co-Expresión con los genes predichos



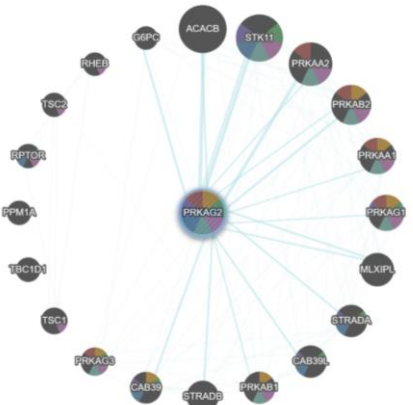
No presenta interacción predicha con ninguno de los genes



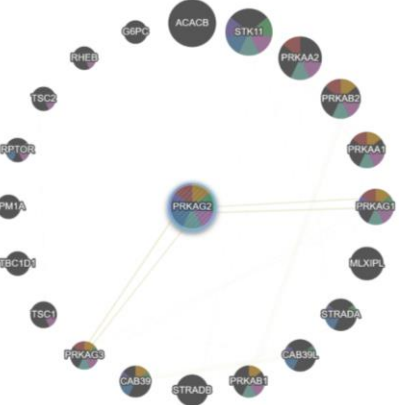
No presenta Co-localización con los genes predichos



Presenta interacción genética con los genes: PRKAB1, TBC1D1, G6PC



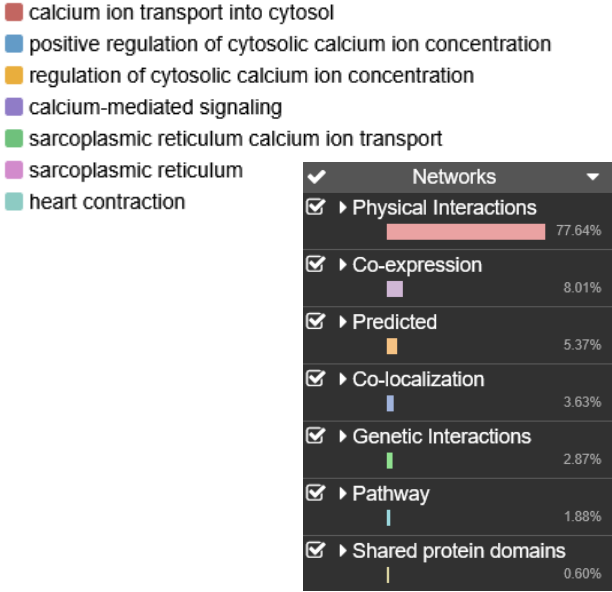
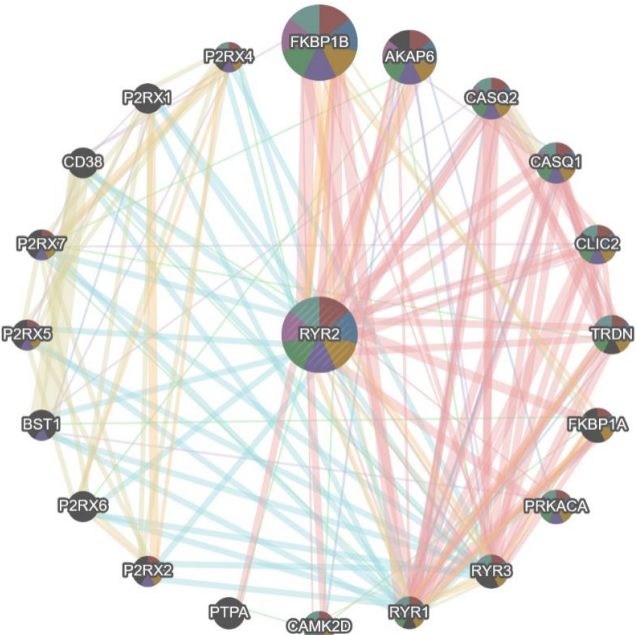
presenta interacción de rutas biológicas con los genes: ACACB, STK11, PRKAA2, PRKAB2, PRKAA1, PRKAG1, MLXIPL, STRADA, CAB39L, PRKAB1, STRADB, CAB39, G6PC



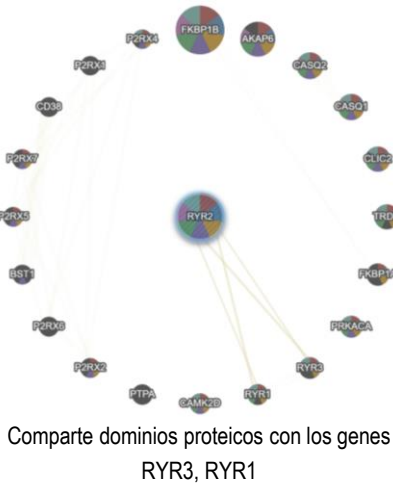
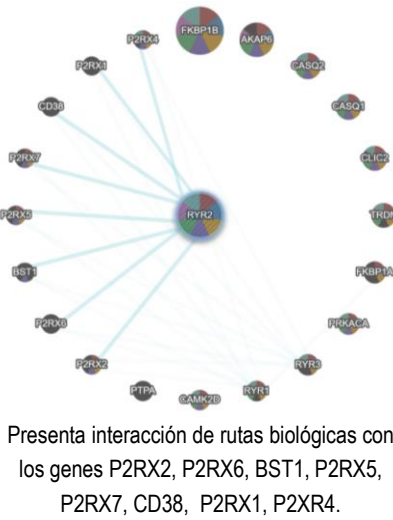
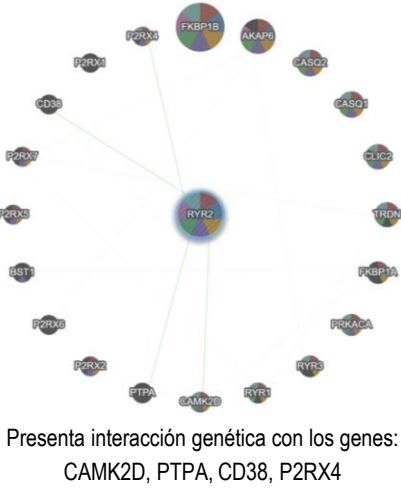
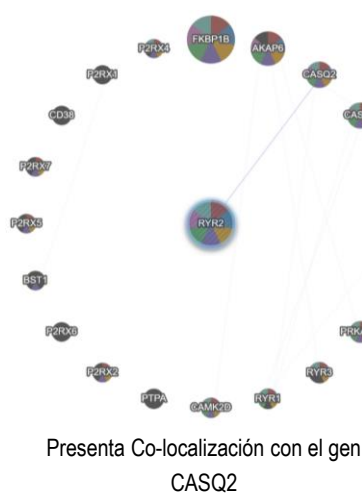
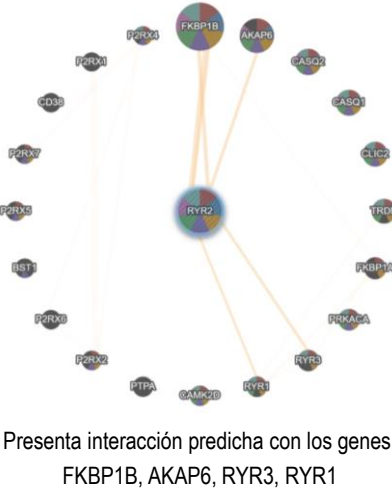
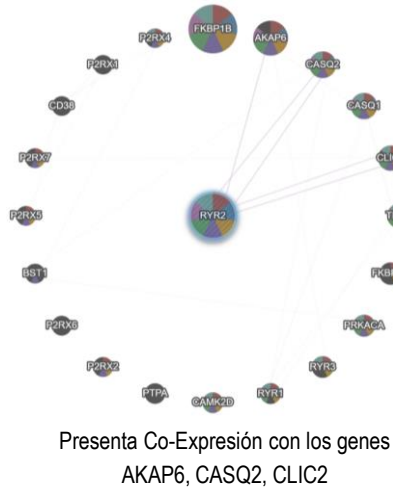
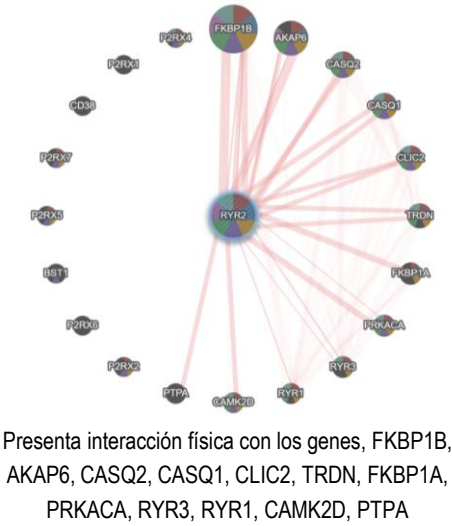
Comparte dominios proteicos con los genes PRKAG1, PRKAG3

GEN RYR2 - Receptor 2 de rianodina

Ubicación celular: Retículo sarcoplásmico

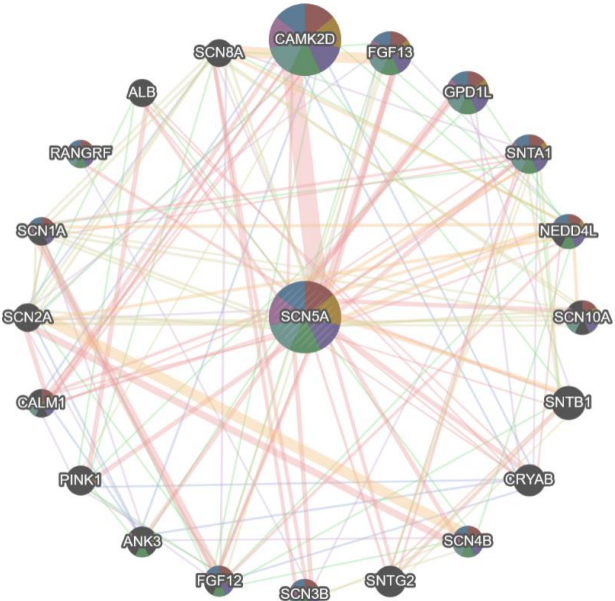


RED DE INTERACCIÓN



GEN SCN5A - Subunidad Alfa 5 del canal dependiente de voltaje de sodio

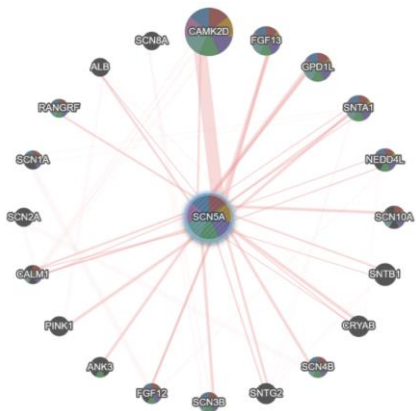
Ubicación celular: Región del disco intercalado



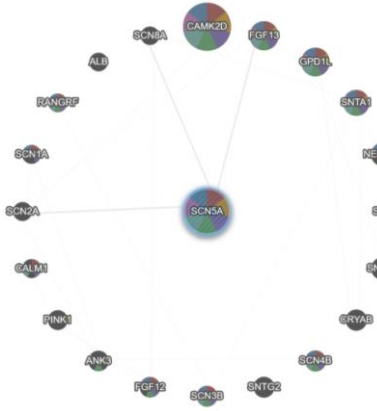
- heart contraction
- regulation of membrane potential
- cardiac muscle contraction
- regulation of sodium ion transport
- regulation of heart contraction
- cardiac muscle cell action potential
- actin-mediated cell contraction

✓	Networks	
✓	Physical Interactions	77.64%
✓	Co-expression	8.01%
✓	Predicted	5.37%
✓	Co-localization	3.63%
✓	Genetic Interactions	2.87%
✓	Pathway	1.88%
✓	Shared protein domains	0.60%

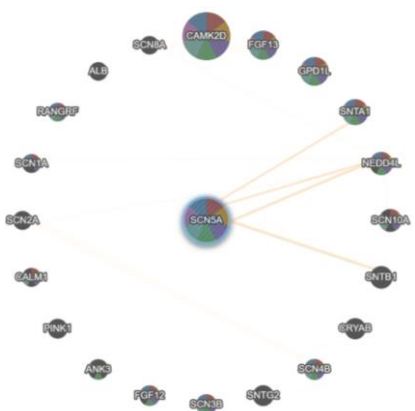
RED DE INTERACCIÓN



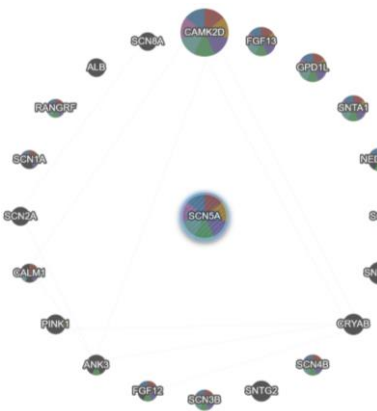
Presenta interacción física con todos los genes excepto SCN2A, SNC1A y SCN8A



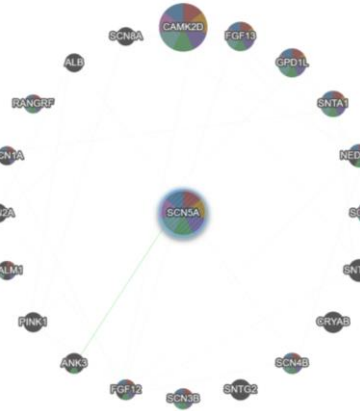
Presenta Co-Expresión con los genes FGF13, SCN2A, SCN8A



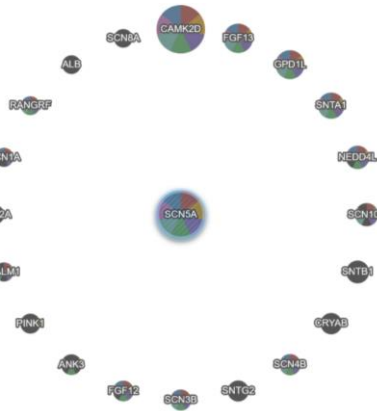
Presenta interacción predicha con los genes: SNTA, NEDD4L, SNTB1



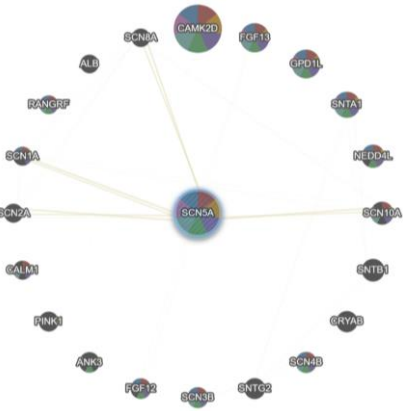
No presenta Co-localización con el gen CASQ2



Presenta interacción genética con el gen ANK3



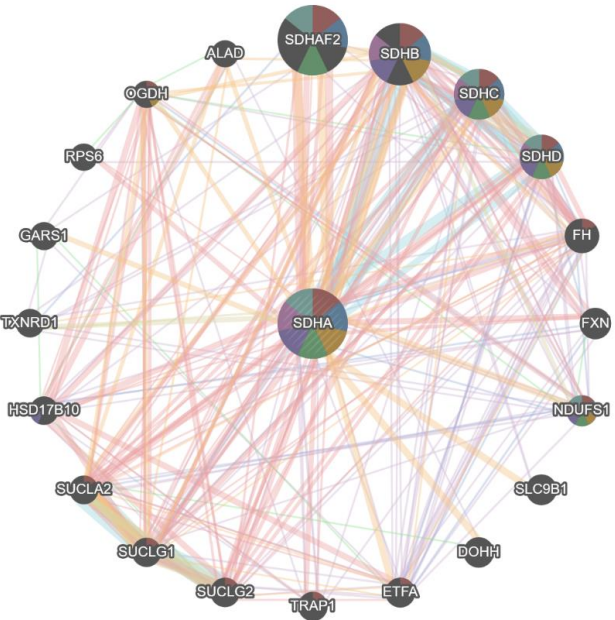
No presenta interacción de rutas biológicas con los genes predichos



Comparte dominios proteicos con los genes SCN10A, SCN2A, SCN1A, SNC8A

GEN SDHA - Subunidad A de la flavoproteína del complejo succinato deshidrogenasa

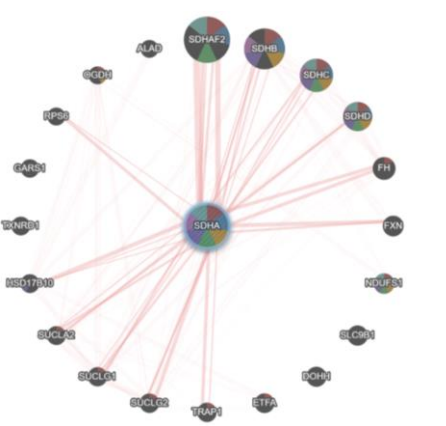
Ubicación celular: Mitocondria



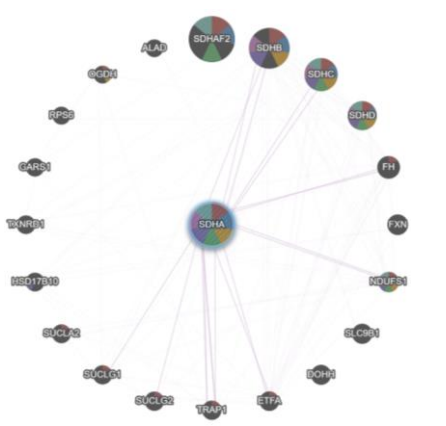
- cellular respiration
- electron transport chain
- oxidoreductase complex
- ATP synthesis coupled electron transport
- mitochondrial protein complex
- respiratory chain complex
- mitochondrial ATP synthesis coupled electron transport

✓	Networks	
✓	Physical Interactions	77.64%
✓	Co-expression	8.01%
✓	Predicted	5.37%
✓	Co-localization	3.63%
✓	Genetic Interactions	2.87%
✓	Pathway	1.88%
✓	Shared protein domains	0.60%

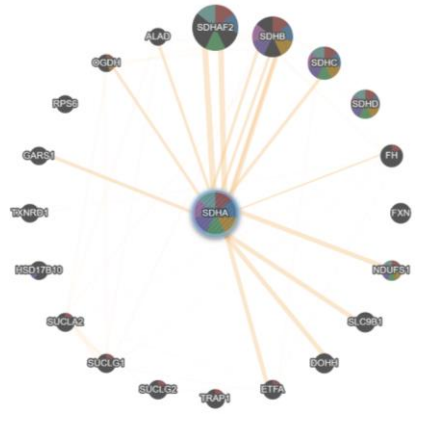
RED DE INTERACCIÓN



Presenta interacción física con los genes, SDHAF2, SDHB, SDHC, SDHD, FH, FXN, TRAP1, SUCLG2, SUCLG1, SUCLA2, HSD17B10, RPS6



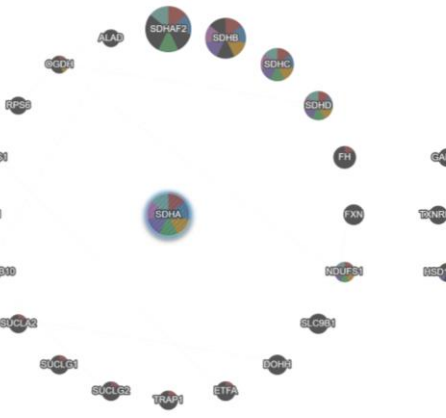
Presenta Co-Expresión con los genes SDHB, SDHC, FH, NDUF51, ETFA, TRAP1, SUCLG2, SUCLG1.



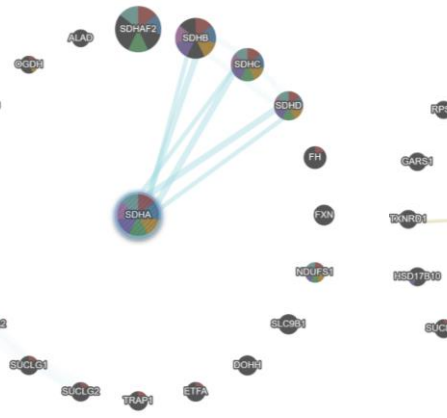
Presenta interacción predicha con los genes: SDHAF2, SDHB, SDHC, FH, NDUF51, SLC9B1, DOHH, ETFA, GARS1, OGDH, ALAD



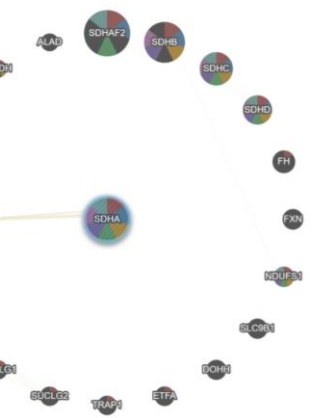
Presenta Co-localización con los genes FH, NDUF51, SUCLG1



No presenta interacción genética con los genes predichos



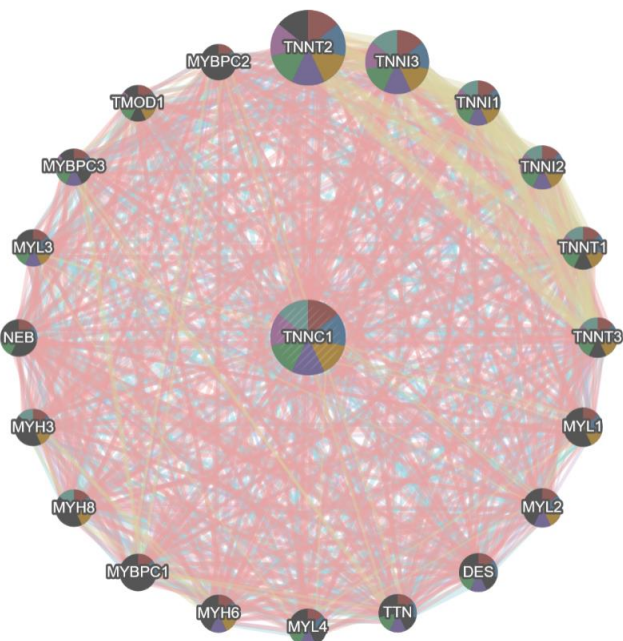
Presenta interacción de rutas biológicas con los genes SDHB, SDHC, SDHD



Comparte dominios proteicos el gen TXNRD1

GEN **TNNC1** - Troponina C1, tipo esquelético y cardíaco lento

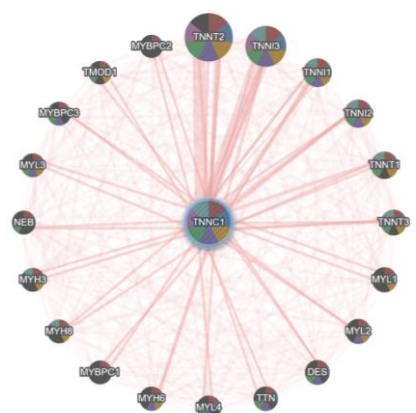
Ubicación celular: Filamentos delgados de actina



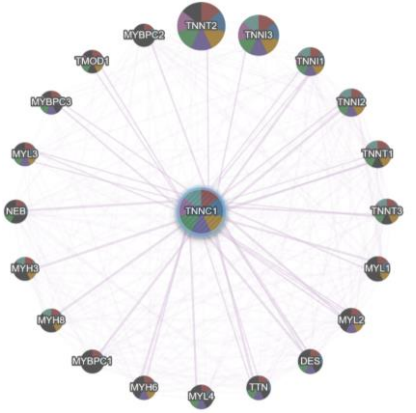
- actin-myosin filament sliding
- actin-mediated cell contraction
- actin cytoskeleton
- heart contraction
- sarcomere
- myofilament
- musculoskeletal movement

Networks	
☒ Physical Interactions	77.64%
☒ Co-expression	8.01%
☒ Predicted	5.37%
☒ Co-localization	3.63%
☒ Genetic Interactions	2.87%
☒ Pathway	1.88%
☒ Shared protein domains	0.60%

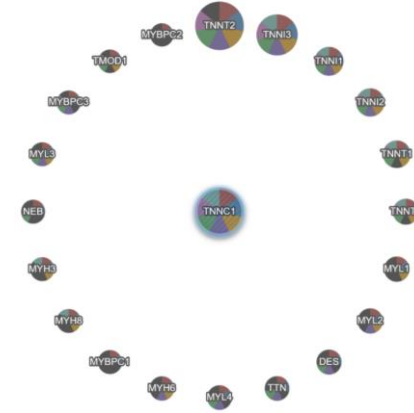
RED DE INTERACCIÓN



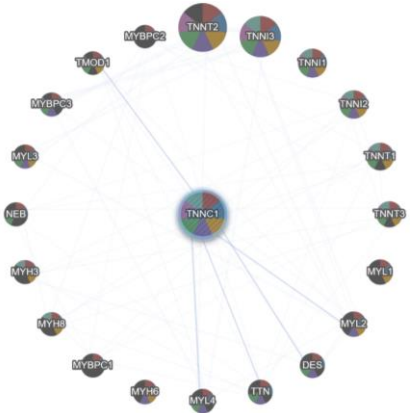
Presenta interacción física con todos los genes predichos



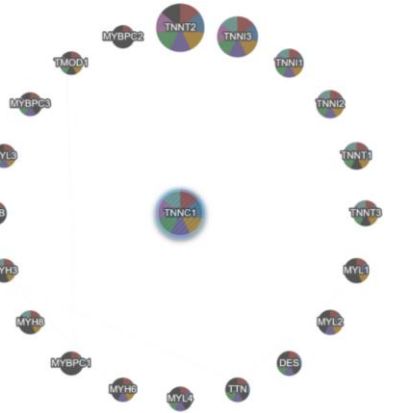
Presenta Co-Expresión con todos los genes predichos



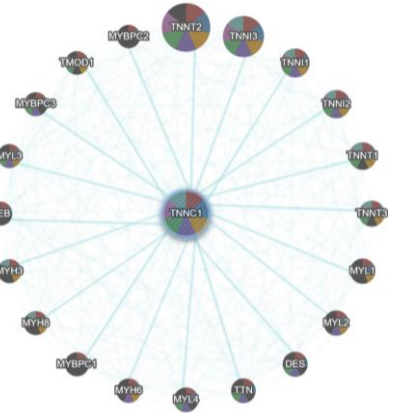
No presenta interacción predicha con ninguno de los genes



Presenta Co-localización con los genes: MYL2, DES, TTN, MYL4, TMOD1



No presenta interacción genética con los genes predichos



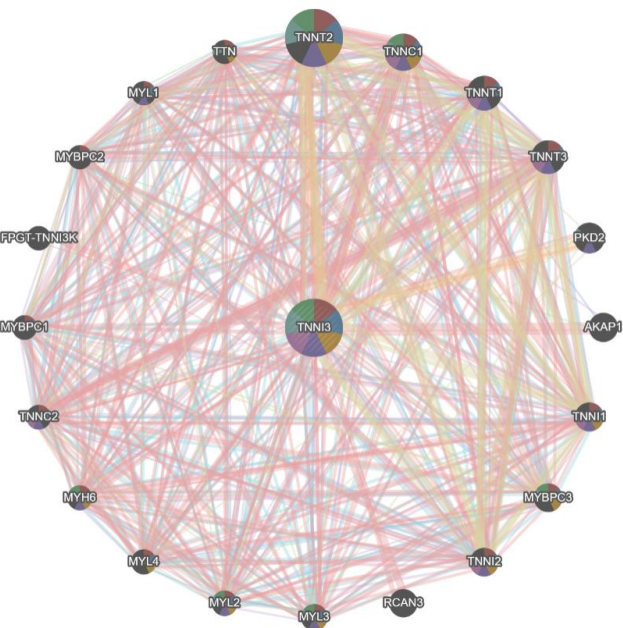
Presenta interacción de rutas biológicas con todos los genes predichos



Comparte dominios proteicos los genes MYL1, MYL2, MYL4, MYL3.

GEN TNNI3 - Troponina I3, tipo cardíaco

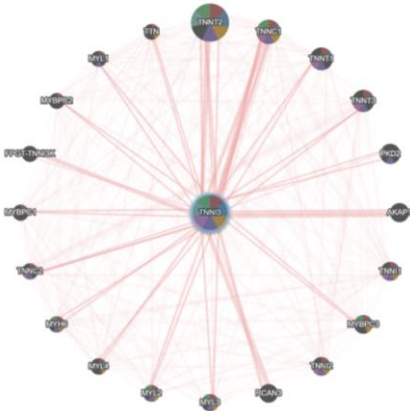
Ubicación celular: Complejo de troponina



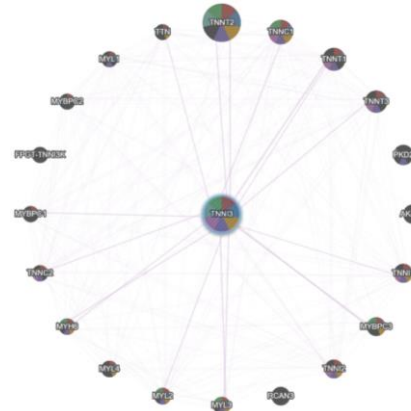
- actin-myosin filament sliding
- actin-mediated cell contraction
- heart contraction
- actin cytoskeleton
- musculoskeletal movement
- heart morphogenesis
- cardiac muscle tissue morphogenesis

✓	Networks	
✓	Physical Interactions	77.64%
✓	Co-expression	8.01%
✓	Predicted	5.37%
✓	Co-localization	3.63%
✓	Genetic Interactions	2.87%
✓	Pathway	1.88%
✓	Shared protein domains	0.60%

RED DE INTERACCIÓN



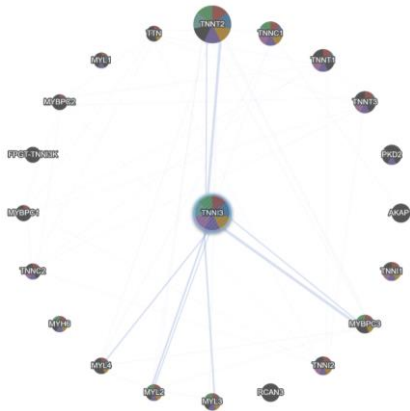
Presenta interacción física con todos los genes a excepción de TNNI1, TNNI2



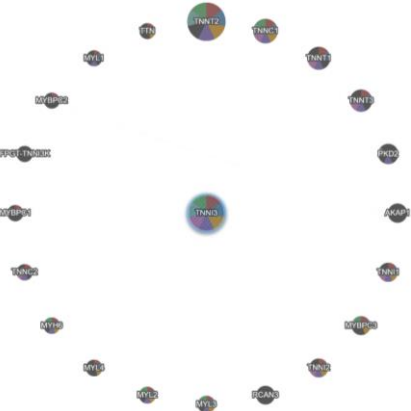
Presenta Co-Expresión con los genes TNNI2, TNNI1, TNNI3, TNNI4, TNNI5, TNNI6, TNNI7, TNNI8, TNNI9, TNNI10, TNNI11, TNNI12, TNNI13, TNNI14, TNNI15, TNNI16, TNNI17, TNNI18, TNNI19, TNNI20, TNNI21, TNNI22, TNNI23, TNNI24, TNNI25, TNNI26, TNNI27, TNNI28, TNNI29, TNNI30, TNNI31, TNNI32, TNNI33, TNNI34, TNNI35, TNNI36, TNNI37, TNNI38, TNNI39, TNNI40, TNNI41, TNNI42, TNNI43, TNNI44, TNNI45, TNNI46, TNNI47, TNNI48, TNNI49, TNNI50, TNNI51, TNNI52, TNNI53, TNNI54, TNNI55, TNNI56, TNNI57, TNNI58, TNNI59, TNNI60, TNNI61, TNNI62, TNNI63, TNNI64, TNNI65, TNNI66, TNNI67, TNNI68, TNNI69, TNNI70, TNNI71, TNNI72, TNNI73, TNNI74, TNNI75, TNNI76, TNNI77, TNNI78, TNNI79, TNNI80, TNNI81, TNNI82, TNNI83, TNNI84, TNNI85, TNNI86, TNNI87, TNNI88, TNNI89, TNNI90, TNNI91, TNNI92, TNNI93, TNNI94, TNNI95, TNNI96, TNNI97, TNNI98, TNNI99, TNNI100



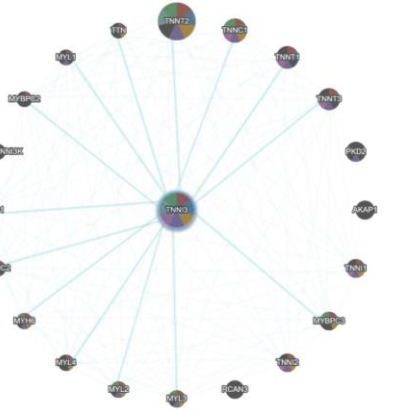
Presenta interacción predicha con los genes TNNI2, y TNNI1



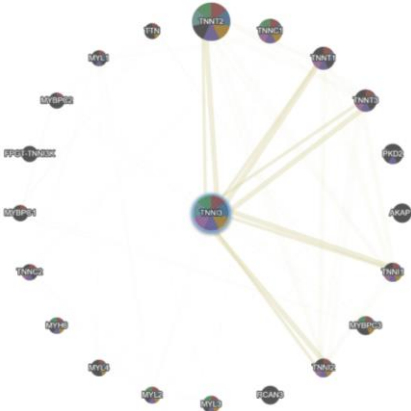
Presenta Co-localización con los genes: TNNI2, TNNI1, TNNI3, TNNI4, TNNI5, TNNI6, TNNI7, TNNI8, TNNI9, TNNI10, TNNI11, TNNI12, TNNI13, TNNI14, TNNI15, TNNI16, TNNI17, TNNI18, TNNI19, TNNI20, TNNI21, TNNI22, TNNI23, TNNI24, TNNI25, TNNI26, TNNI27, TNNI28, TNNI29, TNNI30, TNNI31, TNNI32, TNNI33, TNNI34, TNNI35, TNNI36, TNNI37, TNNI38, TNNI39, TNNI40, TNNI41, TNNI42, TNNI43, TNNI44, TNNI45, TNNI46, TNNI47, TNNI48, TNNI49, TNNI50, TNNI51, TNNI52, TNNI53, TNNI54, TNNI55, TNNI56, TNNI57, TNNI58, TNNI59, TNNI60, TNNI61, TNNI62, TNNI63, TNNI64, TNNI65, TNNI66, TNNI67, TNNI68, TNNI69, TNNI70, TNNI71, TNNI72, TNNI73, TNNI74, TNNI75, TNNI76, TNNI77, TNNI78, TNNI79, TNNI80, TNNI81, TNNI82, TNNI83, TNNI84, TNNI85, TNNI86, TNNI87, TNNI88, TNNI89, TNNI90, TNNI91, TNNI92, TNNI93, TNNI94, TNNI95, TNNI96, TNNI97, TNNI98, TNNI99, TNNI100



No presenta interacción genética con los genes predichos



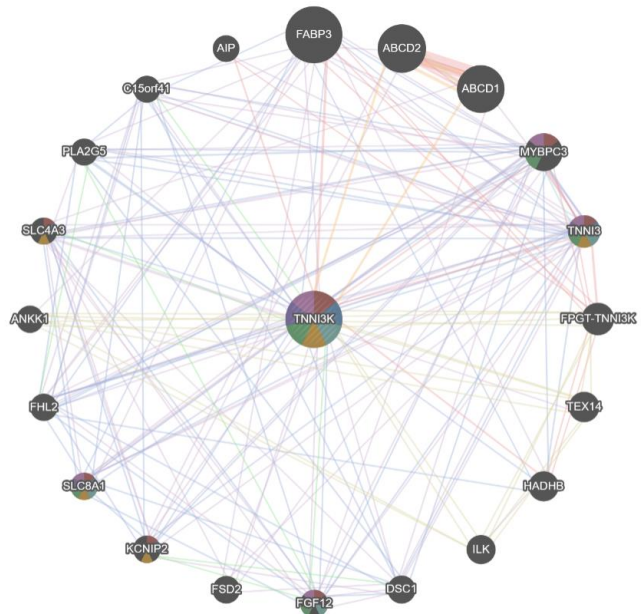
Presenta interacción de rutas biológicas con todos los genes a excepción de TNNI2, TNNI1, TNNI3, TNNI4, TNNI5, TNNI6, TNNI7, TNNI8, TNNI9, TNNI10, TNNI11, TNNI12, TNNI13, TNNI14, TNNI15, TNNI16, TNNI17, TNNI18, TNNI19, TNNI20, TNNI21, TNNI22, TNNI23, TNNI24, TNNI25, TNNI26, TNNI27, TNNI28, TNNI29, TNNI30, TNNI31, TNNI32, TNNI33, TNNI34, TNNI35, TNNI36, TNNI37, TNNI38, TNNI39, TNNI40, TNNI41, TNNI42, TNNI43, TNNI44, TNNI45, TNNI46, TNNI47, TNNI48, TNNI49, TNNI50, TNNI51, TNNI52, TNNI53, TNNI54, TNNI55, TNNI56, TNNI57, TNNI58, TNNI59, TNNI60, TNNI61, TNNI62, TNNI63, TNNI64, TNNI65, TNNI66, TNNI67, TNNI68, TNNI69, TNNI70, TNNI71, TNNI72, TNNI73, TNNI74, TNNI75, TNNI76, TNNI77, TNNI78, TNNI79, TNNI80, TNNI81, TNNI82, TNNI83, TNNI84, TNNI85, TNNI86, TNNI87, TNNI88, TNNI89, TNNI90, TNNI91, TNNI92, TNNI93, TNNI94, TNNI95, TNNI96, TNNI97, TNNI98, TNNI99, TNNI100



Comparte dominios proteicos los genes TNNI2, TNNI1, TNNI3, TNNI4, TNNI5, TNNI6, TNNI7, TNNI8, TNNI9, TNNI10, TNNI11, TNNI12, TNNI13, TNNI14, TNNI15, TNNI16, TNNI17, TNNI18, TNNI19, TNNI20, TNNI21, TNNI22, TNNI23, TNNI24, TNNI25, TNNI26, TNNI27, TNNI28, TNNI29, TNNI30, TNNI31, TNNI32, TNNI33, TNNI34, TNNI35, TNNI36, TNNI37, TNNI38, TNNI39, TNNI40, TNNI41, TNNI42, TNNI43, TNNI44, TNNI45, TNNI46, TNNI47, TNNI48, TNNI49, TNNI50, TNNI51, TNNI52, TNNI53, TNNI54, TNNI55, TNNI56, TNNI57, TNNI58, TNNI59, TNNI60, TNNI61, TNNI62, TNNI63, TNNI64, TNNI65, TNNI66, TNNI67, TNNI68, TNNI69, TNNI70, TNNI71, TNNI72, TNNI73, TNNI74, TNNI75, TNNI76, TNNI77, TNNI78, TNNI79, TNNI80, TNNI81, TNNI82, TNNI83, TNNI84, TNNI85, TNNI86, TNNI87, TNNI88, TNNI89, TNNI90, TNNI91, TNNI92, TNNI93, TNNI94, TNNI95, TNNI96, TNNI97, TNNI98, TNNI99, TNNI100

GEN TNNI3K - Quinasa de interacción con troponina I

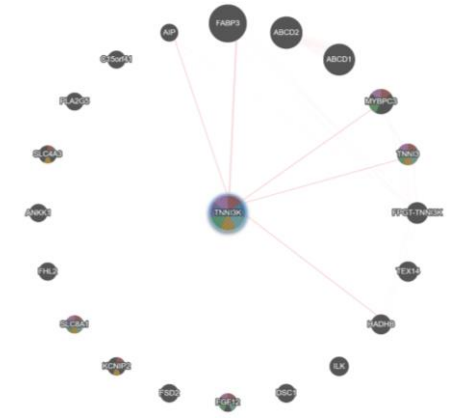
Ubicación celular: Núcleo/discos Z



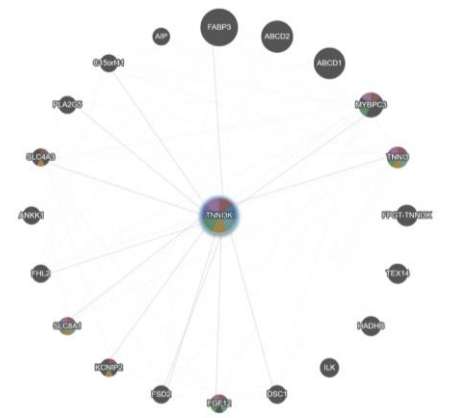
- heart contraction
- regulation of heart contraction
- cardiac muscle contraction
- regulation of blood circulation
- striated muscle contraction
- regulation of striated muscle contraction
- muscle contraction

Networks	
☒ Physical Interactions	77.64%
☒ Co-expression	8.01%
☒ Predicted	5.37%
☒ Co-localization	3.63%
☒ Genetic Interactions	2.87%
☒ Pathway	1.88%
☒ Shared protein domains	0.60%

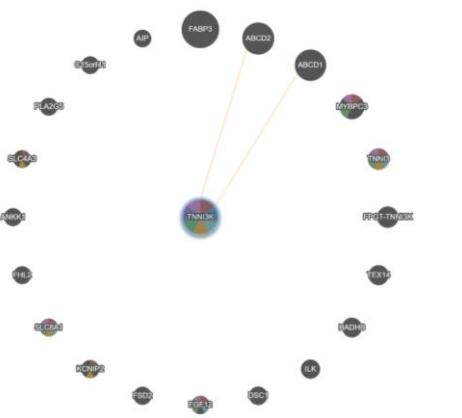
RED DE INTERACCIÓN



Presenta interacción física con los genes FABP3, MYBPC3, TNNI3, HADHB, AIP



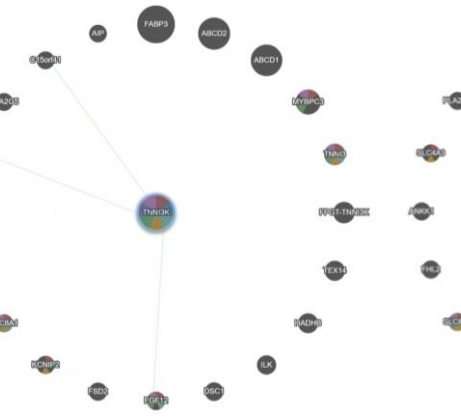
Presenta Co-Expresión con todos los genes excepto ABCD2, ABCD1, FPGT-TNNI3K, TEX14, HADHB, ILK, ANKK1, AIP.



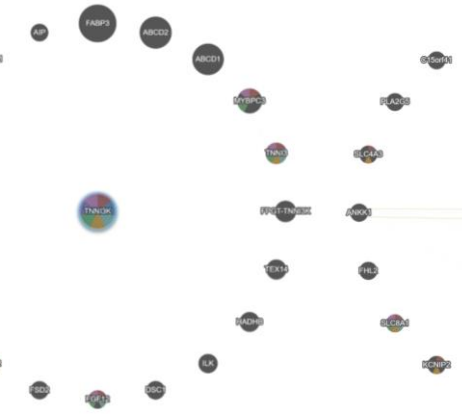
Presenta interacción predicha con los genes ABCD2, ABCD1



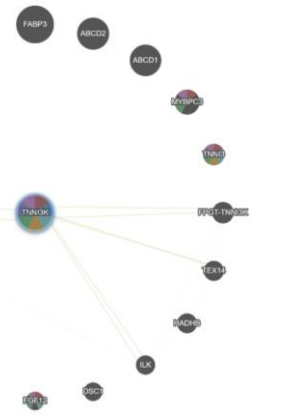
Presenta Co-localización con los genes: MYBPC3, TNNI3, DSC1, FGF12, KCNIP2, SLC8A1, FHL2, SLC4A3, PLA2G5, C15orf41



Presenta interacción genética con los genes FGF12, SLC4A3, C15orf41



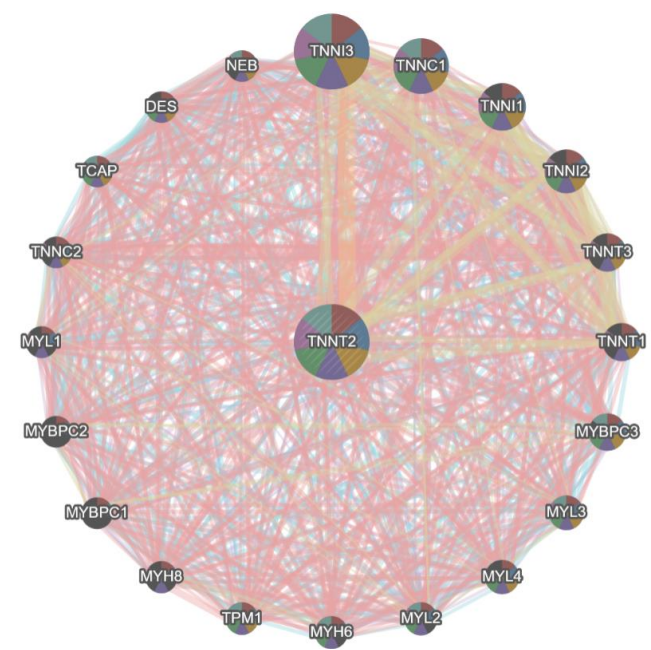
No presenta interacción de rutas biológicas con los genes predichos



Comparte dominios proteicos los genes FPGT-TNNI3K, TEX14, ILK, ANKK1

GEN TNNT2 - Troponina T2, tipo cardíaco

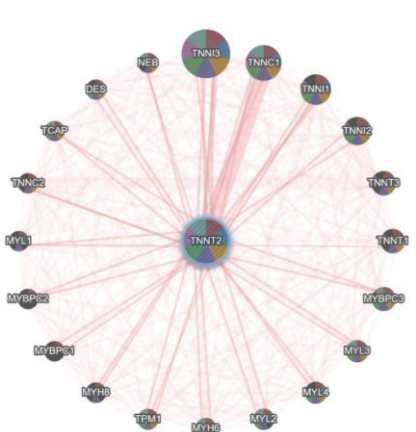
Ubicación celular: Sarcómero



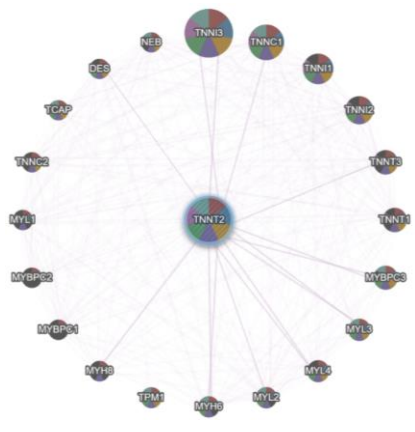
- actin-myosin filament sliding
- actin-mediated cell contraction
- sarcomere
- myofibril
- heart contraction
- actin cytoskeleton
- cardiac muscle tissue development

✓	Networks	
✓	Physical Interactions	77.64%
✓	Co-expression	8.01%
✓	Predicted	5.37%
✓	Co-localization	3.63%
✓	Genetic Interactions	2.87%
✓	Pathway	1.88%
✓	Shared protein domains	0.60%

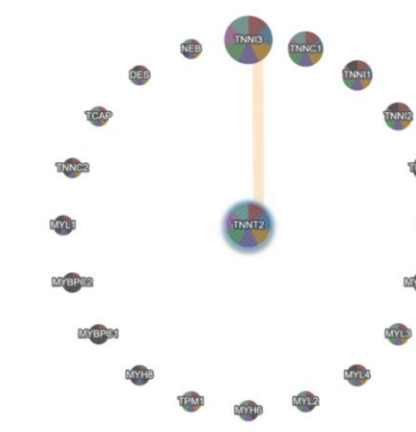
RED DE INTERACCIÓN



Presenta interacción física con todos los genes excepto TNNI3



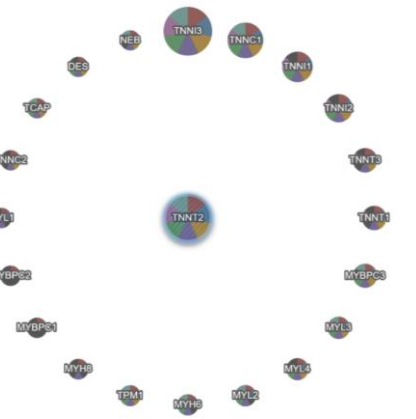
Presenta Co-Expresión con los genes TNNI3, TNNC1, TNNT3, MYBPC3, MYL3, MYL4, MYL2, MYH6, TPM1, MYH8, DES



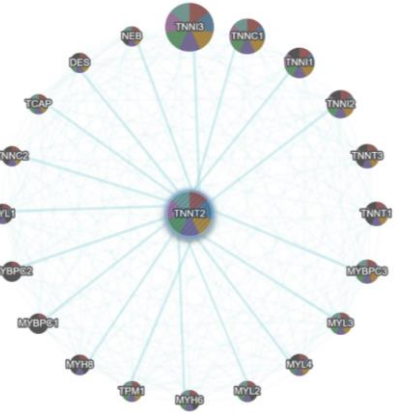
Presenta interacción predicha con el gen TNNI3



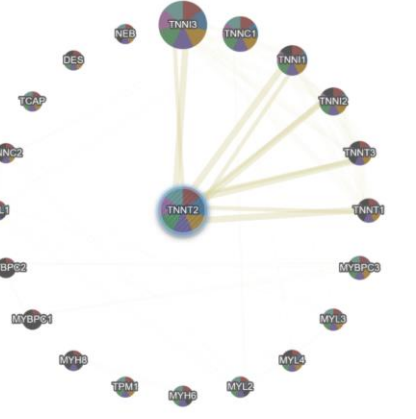
Presenta Co-localización con los genes: TNNI3, MYBPC3, MYL3, MYL4, MYL2, TPM1.



No presenta interacción genética con los genes predichos



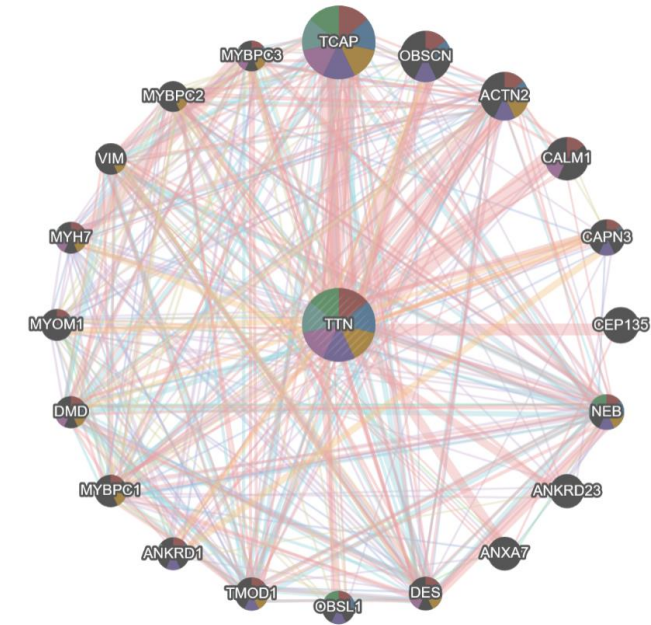
Presenta interacción de rutas biológicas con todos los genes, excepto TNNT3, TNNI1



Comparte dominios proteicos los genes TNNI3, TNNI1, TNNI2, TNNT3, TNNI1.

GEN TTN - Titina

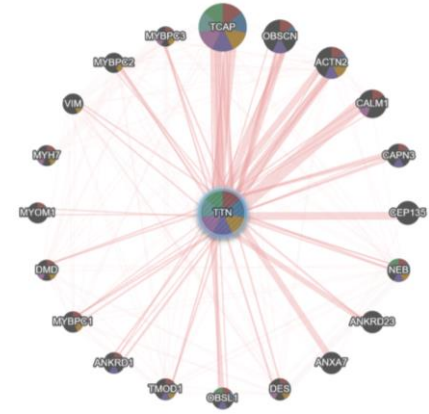
Ubicación celular: Sarcómero



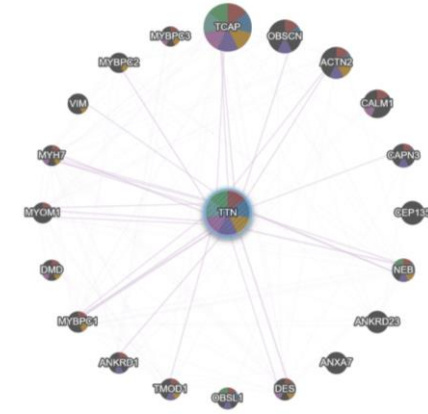
- contractile fiber
- sarcomere
- actin-myosin filament sliding
- actomyosin structure organization
- heart contraction
- heart development
- cardiac cell development

Networks	
Physical Interactions	77.64%
Co-expression	8.01%
Predicted	5.37%
Co-localization	3.63%
Genetic Interactions	2.87%
Pathway	1.88%
Shared protein domains	0.60%

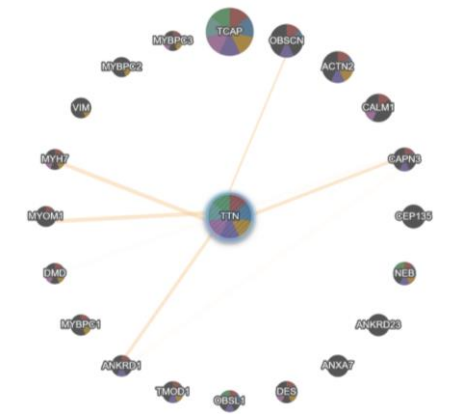
RED DE INTERACCIÓN



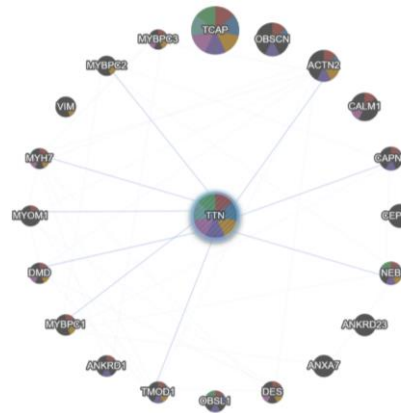
Presenta interacción física con todos los genes excepto MYH7



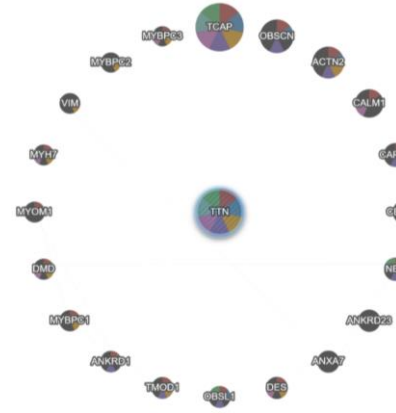
Presenta Co-Expresión todos los genes a excepción de CALM1, CEP135, ANKRD23, ANXA7, OBSL1, DMD, MYBPC3



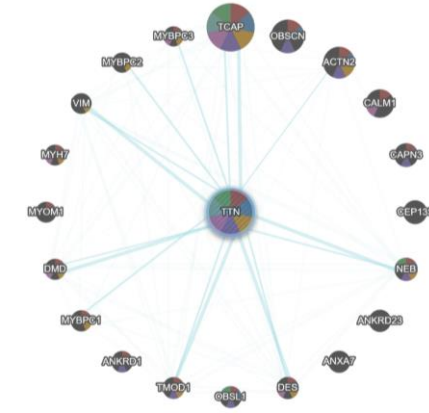
Presenta interacción predicha con los genes OBSCN, CAPN3, ANKRD1, MYOM1, MYH7



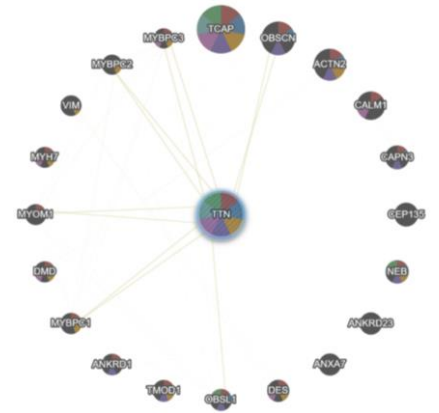
Presenta Co-localización con los genes: ACTN2, CAPN3, NEB, TMOD1, MYBPC1, DMD, MYOM1, MYH7, MYBPC2



No presenta interacción genética con los genes predichos



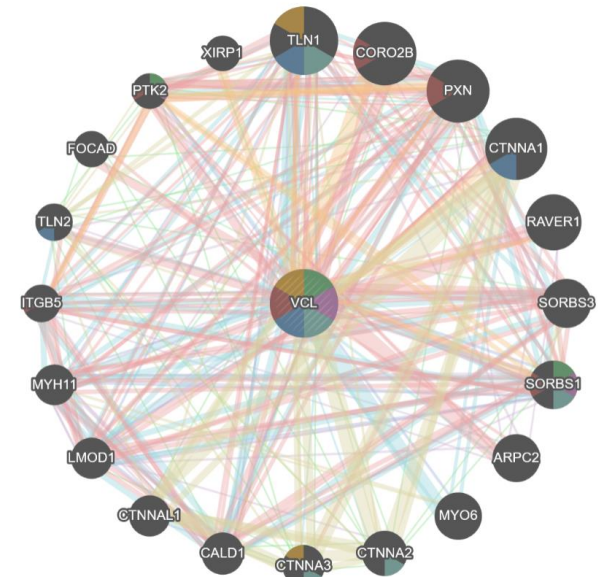
Presenta interacción de rutas biológicas con los genes TCAP, ACTN2, NEB, DES, TMOD1, MYBPC1, DMD, VIM, MYBPC2, MYBPC3



Comparte dominios proteicos los genes OBSCN, OBSL1, MYBPC1, MYOM1, MYBPC2, MYBPC3

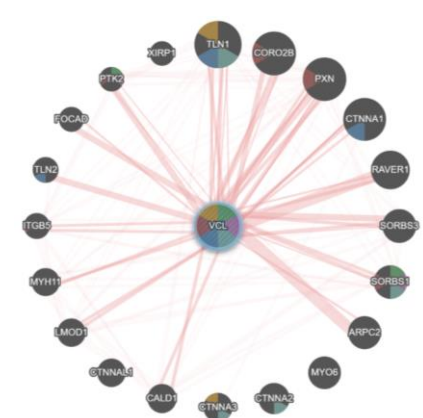
GEN VCL - vinculina

Ubicación celular: citoesqueleto

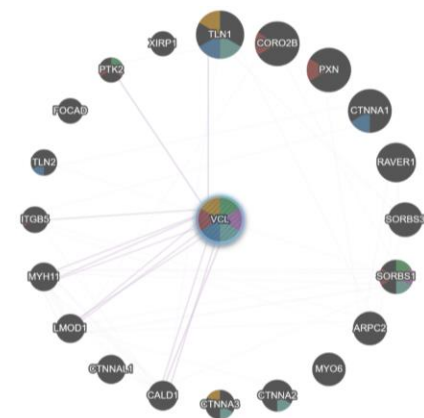


Networks	
☒ Physical Interactions	77.64%
☒ Co-expression	8.01%
☒ Predicted	5.37%
☒ Co-localization	3.63%
☒ Genetic Interactions	2.87%
☒ Pathway	1.88%
☒ Shared protein domains	0.60%

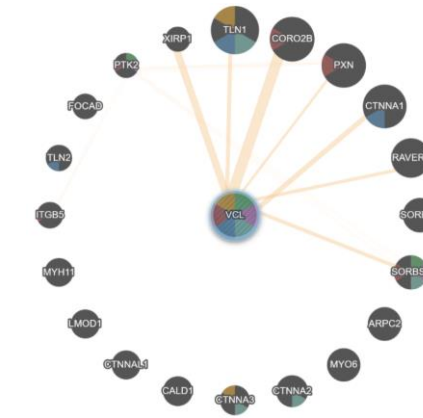
RED DE INTERACCIÓN



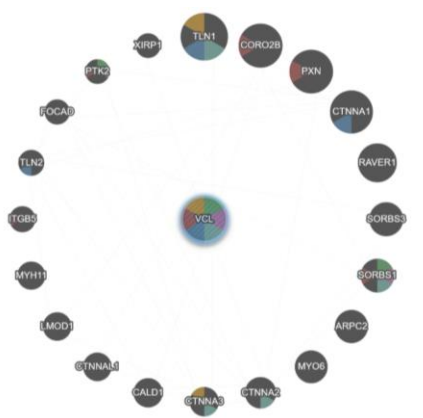
Presenta interacción física con los genes:
TLN1, CORO2B, PXN, CTNNA1, RAVR1,
SORBS3, SORBS1, ARPC2, CALD1 LMOD1,
MYH11, ITGB5, TLN2, FOCAD, PTK2



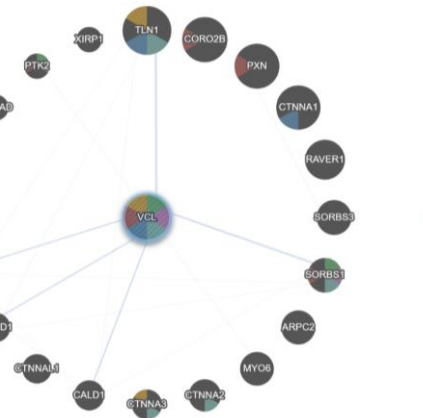
Presenta Co-Expresión con los genes:
TLN1, CALD1, CTNNAL1, LMOD1,
MYH11, ITGB5, PTK2



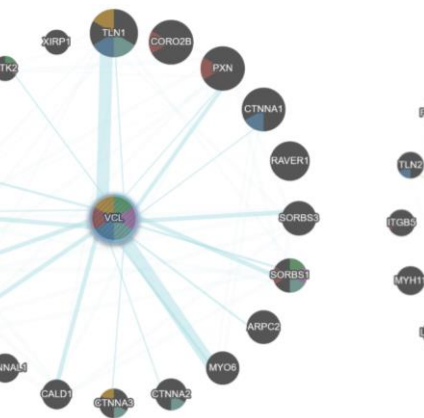
Presenta interacción predicha con los genes:
XIRP1, TLN1, CORO2B, PXN,
CTNNA1, RAVR1, SORBS1



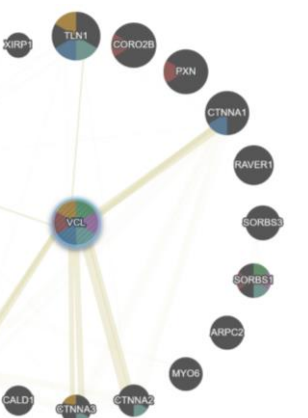
Sin interacción genética con los genes



Presenta Co-localización con los genes:
TLN1, SORBS1, CALD1,
LMOD1, MYH11



Presenta interacción de rutas biológicas con los genes:
TLN1, PXN, CTNNA1, SORBS3, SORBS1,
ARPC2, MYO6, CTNNA2, CTNNA3, CALD1,
CTNNAL1, LMOD1, MYH11, ITGB5, TLN2, PTK2



Comparte dominios proteicos con los genes:
TLN1, CTNNA1, CTNNA2
CTNNAL1, TLN2