

Product Information

MemDX™ Membrane Protein Human RYR1 (Ryanodine receptor 1) Full Length

Cat. No.: **MPC1066K**

This product is for research use only and is not intended for diagnostic use.

This product is a 565.1 kDa Human RYR1 membrane protein expressed in HEK293. The protein is for research use only and is not approved for use in humans or in clinical diagnosis.

Product Specifications

Host Species

Human

Target Protein

RYR1

Protein Length

Full length

Protein Class

Transporter; Ion channel

Molecular Weight

565.1 kDa

TMD

6

Sequence

MGDAEGEDEVQFLRTDDEVVLQCSATVLKEQLKLCLAAEGFGNRLCFLEP
TSNAQNVPPDLAICCFVLEQSLSVRALQEMLANTVEAGVESSQGGGHRTL
LYGHAILLRHAHSRMYLSCLTTSRSMTDKLAFDVGLQEDATGEACWWTMH
PASKQRSEGEKVRVGGDDIILVSVSSERYLHLSTASGELQVDASFMQTLWN
MNPICSRCEEFGVTTGGHVLRLFHGHMDECLTISPADSDDQRRLVYYEGGA
VCTHARSLWRLEPLRISWSGSHLRWGQPLRVHRVTTGQYLALTEDQGLVV
VDASKAHTKATSFCFRISKEKLDVAPKRDVEGMGPPEIKYGESLCFVQHV
ASGLWLTYAAPDPKALRLGVLLKKAMLHQEGHMDDALSITRCQQEESSQAA
RMIHSTNGLYNQFIKSLDSFSGKPRGSGPPAGTALPIEGVILSLQDLIIY
FEPPSEDLQHEEKQSKLRSRNRQSLFQEEGMLSMVLCIDRLNVYTTAA
HFAEFAGEEAAESWKEIVNLLYELLASLRGNRSNCALFSTNLDWLVS KL
DRLEASSGILEVLYCVLIESPEVLNIIQENHIKSIISLLDKHGRN HKVLD
VLCSLCVCNGVAVRSNQDLITENLLPGRELLQTNLINYVTSIRPNIFVG
RAEGTTQYSKWYFEVMVDEVTPFLT AQATHLRVGWALTEGYTPYPGAGEG
WGGNGVGDDLYSYGFDGLHLWTGHVARPVTSPGQHLLAPEDVISCCLDLS
VPSISFRINGCPVQGVFESFNLDGLFFPVVSFSAGVKVRFLGGRHGEFK
FLPPPGYAPCHEAVLPRERLHLEPIKEYRREGPRGPHLVGPSRCLSHTDF
VPCPVDTVQIVLPPHLERIREKLAENIHELWALTRIEQGWTYGPVRDDNK
RLHPCLVDFHSLPEPERNYNLQMSGETLKTLLALGCHVGMADEKAEDNLK
KTKLPKTYMMSNGYKPAPLDLSHVRLTPAQTTLVDR LAENGHNVWARDRV
GGQWSYSAVQDIPARRNPRLVPYRLLDEATKRSNRDSLCAVVRTLLGYGY

NIEPPDQEPSQVENQSRCDVRIFRAEKSYTVQSGRWYFEFEAVTTGEMR
VGWARPELPRDVELGADELAYVFNGHRGQRWHLGSEPFGRPWQPGDVVGC
MIDLTENTIIFTLNGEVLMSDSGSETAFREIEIGDGLPVC SLGPGQVGH
LNLGQDVSSLRFFAICGLQEGFEPFAINMQRPVTTWFSKGLPQFEPVPLE
HPHYEVS RVDGTVDTPPCLRLTHRTWGSQNSLVEMFLRLSLPVQFHQHF
RCTAGATPLAPPGLQPPAEDEARAAEPDPDYENLRRSAGGWSEAENGKEG
TAKEGAPGGTPQAGGEAQPARAENEKDATTEKNKKRGFLFKAKKVAMMTQ
PPATPTLPRLPHDVVPADNRDDPEILNTTTYYSVRVFAGQEPSCVWAG
WVTPDYHQHDM SFDLSKVRVVTVTMGDEQGNVHSSLKCSNCYMWVGGDFV
SPGQQGRISHTDLVIGCLVDLATGLMTFTANGKESNTFFQVEPN TKLFPA
VFVLP THQNVIQFELGKQKNIMPLSAAMFQSERKNPAPQCPRLEMQMLM
PVSWSRMPNHFLQVETR RAGERLGWAVQCQEPLTMMALHIPEENRCMDIL
ELSERLDLQRFHSHTLRLYRAVCALGNNRVAHALCSHVDQAQLLHALEDA
HLPGLPLRAGYYDLLISIHLESACRSRRSMLSEYIVPLTPETRAITLFPPG
RSTENGHPRHGLPGVGVTSLRPPHHFSPPCFVAALPAAGAAEAPARLSP
AIPLEALRDKALRMLGEAVRDGGQHARDPVGGSVEFQFVPVLKLVSTLLV
MGIFGDEDVKQILKMIEPEVFTEEEEEEEDEEEEGEEDEEEKEEDEEETA
QEKEDEEKEEEAAEGEKEEGLEEGLLQMKLPESVKLQMCHLLEYFCDQE
LQHRVESLAFAERYVDKLQANQRSRYGLLIKAFSMTAAETARRTREFRS
PPQEQINMLLQFKDGTDEEDCPLPEEIRQDLLDFHQDLLAHCGIQLDGEE
EEPEEETTLGSRLMSLLEKVRVLVKKKEEKPEEERSAAESKPRSLQELVSH
MVVRWAQEDFVQSPELVRAMFSLLRQYDGLGELLRALPRAYTISPSSVE
DTMSLLECLGQIRSL LIVQMGPQEENLMIQSIGNIMNNKVIFYQHNL MRA
LGMHETVMEVMVNVLGGSSEKIRFPKMTVSCCRFLCYFCRISRQNRQSM
FDHLSYLLENSIGLGMQGSTPLDVAAASVIDNNELALALQE QDLEKVV S
YLAGCGLQSCPMLVAKGYPDIGWNPCGGERYLDFLRFAVFVNGESVEENA
NVVVRLIRKPECFGPALRGEGGSGLLAAIEEAIRISEDPA RDGPGIRRD
RRREHFGEPEPEENRVHLGHAIMSFYAALIDLLGRCAPEMH LIQAGKGEA
LRIRAILRSLVPLEDLVGIISLPLQIPTLGKDGALVQPKMSASFVPDHKA
SMVLFLDRVYGIENQDFLLHVL DVGFLPDMRAAASLDTATFSTTEMALAL
NRYLCLAVLPLITKCAPL FAGTEHRAIMVDSMLHTVYRLSRGRSLTKAQR
DVIEDCLMSLCRYIRPSMLQHLLRRLVFDVPILNEFAKMPLKLLTNHYER
CWKYYCLPTGWANFGVTSEELHLTRKLFWGIFDSL AHKKYDPELYRMAM
PCLCAIAGALPPDYVDASYS SSKAEKKATVDAEGNFDPRPVETLNVIIPEK
LDSFINKFAEYTHEKWAFDKIQNNWSYGENIDEELKTHPMLRPYKTFSEK
DKEIYRWPIKESLKAMIAWEWTIEKAREGEEEEKTEKKKTRKISQSAQTYD
PREGYNPQPPDL SAVTSLRELQAMAEQLAENYHNTWGRKKKQELEAKGGG
THPLLVPYDTLTAK EKARDREKAQELLKFLQMNGYAVTRGLKDMELDSSS
IEKRFAFGFLQQLLRWMDISQEFIAHLEAVVSSGRVEKSPHEQEIKFFAK
ILLPLINQYFTNHCLYFLSTPAKVLGSGGHASNKEKEMITSLFCKLAALV
RHRVSLFGTDAPAVVNCLHILARSLDARTVMKSGPEIVKAGLRSFFESAS
EDIEKMVENLRLGKVSQARTQVKGVGQNLTYTTVALLPVLTTLFQHIAQH
QFGDDVILDDVQVSCYRTLCSIYSLGTTKNTYVEKLRPALGECLARLAAA
MPVAFLEPQLNEYNACSVYTTKSPRERAILGLPNSVEEMCPDIPVLERLM
ADIGGLAESGARYTEMPHVIEITL PMLCSYLPRWWERGPEAPPSALPAGA
PPPCTAVTSDHLN SLLGNILRIIVNNLGIDEASWMKRLAVFAQPIVSRAR
PELLQSHFIPTIGRLRK RAGKVVSEEEQLRLEAKAE AQEGELLVRDEFSV
LCRDLYALYPLLIRYVDNNRAQWLTEPNPSAEELFRMVGEIFIYWSKSHN
FKREEQN FVVQNEINMSFLTADNKSMAKAGDIQSGGSDQERTKKKRRG
DRYSVQTS LIVATLKKMLPIGLNMCAPTDQDLITLAKTRYALKD TDEEVR
EFLHNNLHLQGKVEGSPSLRWQMALYRGVPGREEDADDPEKIVRRVQEV S
AVLYYLDQTEHPYKSKKAVWHKLLSKQRRRAVVACFRMTPLYNLPTHRAC
NMFLESYKAAWILTEDHSFEDRMIDDL SKAGEQEEEEEEVEEKKPDPLHQ
LVLHFSRTALTEKSKLEDLYLMAYADIMAKSCHLEEGGENGEAE EEEVEV
SFEEKQMEKQRLLYQCARLHTRGAAEMVLQMISACKGETGAMV SSTLKL G
ISILNGGNAEVQQKMLDYLKDKKEVGFFQSIQALMQTCSVLDLNAFERQN
KAEG LGMVNEDGTVINRQNGEKVMADDEFTQDLFRFLQLLCEGHNNDFQN
YLRTQTGNTTTINIIICTVDYLLRLQESISDFYWYYS GKDVIIEEQGKRNF
SKAMSVAKQVFNSLTEYIQGPCTGNQQSLAHSRLWDAVVGFLHVFAHMMM
KLAQDSSQIELLKELDLQKDMVMVLLSLLEGNV VNGMIARQMVDMLVES
SSNVEMILKFFDMFLKLDIVGSEAFQDYVTDPRGLISKKDFQKAMDSQK
QFSGPEIQFLLSCSEADENEMINCEEFANRFQEPARDIGFNVAVLLTNLS
EHVPHDPRLHNFLELAESILEYFRPYLGRIEIMGASRRIERIYFEISETN
RAQWEMPQVKESKRQFIFDVVNEGGEAEKMELFVSFCEDTIFEMQIAAQI
SEPEGEPETDEDEGAGAAEAGAEGAEEGAAGLEGTAATAAAGATARVVAA
AGRALRGLSYRSLRRRVRLRLRTAREATAVAALLWAAVTRAGAAGAGA

AAGALGLLWGSFLGGGLVEGAKKVTVTELLAGMPDPTSDEVHGEQPAGPG
GDADGEGASEGAGDAAEGAGDEEEEAVHEAGPGGADGAVAVTDGGPFRPEG
AGGLGDMGDTTPAEPPTPEGSPILKRKLGV DGV EEEELPPEPEPEPEPELE
PEKADAENGEKEEVPEPTPEPPKKQAPPSPPPKKEEAGGEFWGELEVQRV
KFLNYLSRNFYTLRFLALFLAFAINFILFYKVSDSPPGEDDMEGSAAGD
VSGAGSGGSSGWGLGAGEEAE GDE DENM VY FLEESTGYMEPALRCLSL
HTLVAFLCIIGYNCLKVPLVIFKREKELARKLEFDGLYTEQPEDDDVKG
QWDRVLVNTPSFSPSNYWDKFVKRKVLDKHGDIYGRERIAELLGMDLATLE
ITAHNERKPNPPPGLLTWLM S IDVKYQIWKFVIFTDNSFLYLGWYVMVS
LLGHYNNFFFAAHLLDIAMGVKTLRTLSSVTHNGKQLVMTVGLLAVVVY
LYTVVAFNFFRKFYNKSEDEDEPDMKCDDMMTCYLFHMYVGV RAGGGIGD
EIEDPAGDEYEL YRVVFDITFFFFVIVILLAIQGLIIDAFGELRDQQEQ
VKEDMETKCFICGIGSDYFDTPHGFETHLEEHNLANYMFFLMYLINKD
ETEHTGQESYVWKMYQERCWDFFPAGDCFRKQYEDQLS

Product Description

Expression Systems

HEK293

Tag

Based on specific requirements

Protein Format

Detergent or based on specific requirements

Form

Liquid

Storage

Aliquot and store at -20°C or lower. For long term storage, we recommend to store at -70°C or lower. Avoid freeze/thaw cycles.

Target

Target Protein

RYR1

Full Name

Ryanodine receptor 1

Introduction

This gene encodes a ryanodine receptor found in skeletal muscle. The encoded protein functions as a calcium release channel in the sarcoplasmic reticulum but also serves to connect the sarcoplasmic reticulum and transverse tubule. Mutations in this gene are associated with malignant hyperthermia susceptibility, central core disease, and minicore myopathy with external ophthalmoplegia. Alternatively spliced transcripts encoding different isoforms have been described.

Alternative Names

RYR1; CCO; MHS; RYR; MHS1; RYDR; SKRR; RYR-1; PPP1R137; central core disease of muscle; protein phosphatase 1, regulatory subunit 137; ryanodine receptor 1 (skeletal); sarcoplasmic reticulum calcium release channel; skeletal muscle calcium release channel; skeletal muscle ryanodine receptor; type 1-like ryanodine receptor; Ryanodine receptor 1

Gene ID

[6261](#)

UniProt ID

[P21817](#)