

Recombinant Human USH2A Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51042

Size: 10ug, 100ug

Protein Name: Usherin (Usher syndrome type IIa protein) (Usher syndrome type-2A protein)

Synonym: USH2A

UniProt ID: O75445

UniProt Link: www.uniprot.org/uniprotkb/O75445/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 5202 AA

Molecular Weight: 576 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MNCPVLSLGSGFLFQVIEMLI FAYFASISLTESRGLFPRL ENVGAFKKVSIVPTQAVCGLPDRSTFC HS
SAAAESIQFCTQRFCIQDCPYRSSHPTYTALFSAGLSSCITPDKN DLHPNAHSNSASFIFGNHKSCFS
SPPSPKLMASFTLAVWLKPEQQGVMCVIEKTVDGQIVFKLTISEKETMFYYRTVNGLQPPIKVMTLGR
ILVKKWIHL SVQVHQTKISFFINGVEKDHTPFNARTLSGSITDFASGTVQIGQSLNGLEQFVGRMQDF
RLYQVALTNREILEVFSGDLLRLHAQSHCRCPGSHPRVHPLAQRYCIPNDAGDTADNRVSRLNPEA
HPLSFVNDNDVGT SWVSNVFTNITQLNQGV TISVDLENGQYQVFYIIQFFSPQPTEIRIQRKKENSLD
WEDWQYFARNCGAFGMKNNGDLEKPD SVNCLQLSNFTPYSRGNVTF SILTPGPNYRPGYNNFYNT
PSLQEFVKATQIRFH FHGQYYTTETAVNLRHRY YAVDEITISGRCQCHGHADNCDTTSQP YRCLCSQ
ESFTEGLHCDRCLPLYNDKPF RQGDQVYAFNCKPCQCNSH SKSCHYNISVD PFPFEHFRGGGGVC
DDCEHNTTGRNCELCKDYFFRQVGADPSAIDVCKPCDCDTV GTRNGSILCDQIGGQCNC KRHVSG
RQCNCQCN GFYNLQELDPDGCSPCNCNTSGTV DGDITCHQNSGQCKCKANVIGLRCDHCNFGFKF
LRSFNDVGCEPCQCN LHGSVNKFCNPHSGQCECKKEAKGLQC DTCRENFYGLDVTNCKACDCDT
AGSLPGTV CNAKTGQCICKPNVEGRQCNC KLEGNFYLRQNN SFLCLPCNCDKTGTINGSL LCNKST
GQCPCKLGVTGLRCNQCEPHRYNLTIDNFQH CQMCECDSLGTLPGTICDPISGQCLCVPNRQGR R
CNQCQPGFYISP GNATGCLPCSCHTTGAVNHICNSLTGQCVCQDASIAGQRCDQCKDHYFGFDPQ
TGRCQPCNCHLSGALNETCHLVTGQCFCKQFVTGSKCDACVPSASHLDVNNLLGCSKTPFQQPPP
RGQVQSSSAINLSWSPD SPNAHWLTYSLLRDGFEIYTTEDQYPYSIQYFLD TDLLPYTKYSYYIETT
NVHGSTRSVAVTYKTKPGVPEGNLTLSYIIPIGSDSVTLTWTTLSNQSGPIEKYILSCAPLAGGQPCVS
YEGHETSATIWNLV PFAKYDFS VQACTSGGCLHSLPITVTTAQAPPQRLSPPKMQKISSTELHVEWS



PPAELNGIIIRYELYMRRRLRSTKETTSEESRVFQSSGWLSPHSFVESANENALKPPQMTTITGLEPY
TKYEFRVLAVNMAGSVSSAWVSERTGESAPVFMIPPSVFPLSSSYSLNISWEKPADNVTRGKVVGYDI
NMLSEQSPQQSIPMAFSQLLHTAKSQELSYTVEGLKPYRIYEFTITLCNSVGCVTASAGAGQTLAAAP
AQLRPPLVKGINSTTIHLRWFPPEELNGPSPIYQLERRESSLPALMTTMMKGIRFIGNGYCKFPSSTH
PVNTDFTGIKASFRTKVPEGLIVFAASPGNQEEYFALQLKKGRLYFLFDPQGSPEVTTTNDHGKQY
SDGKWHEIIAIRHQAQFGQITLDGIYTGSSAILNGSTVIGDNTGVFLGGLPRSYTILRKDPEIIQKGFVGC
LKDVFHFMKNYNPSAIWEPLDWQSSEEQINVYNSWEGCPASLNEGAQFLGAGFLELHPYMFHGGMN
FEISFKFRTDQLNGLLLFVYNKDGPDFLAMELKSGILTFRLNTSLAFTQVDLLLGLSYCNGKWNKVIK
KEGSFISASVNGLMKHASESGDQPLVVNSPVYVGGIPQELLNSYQHLCLEQGGGCMKDVKFTRGA
VVNLASVSSGAVRVNLDGCLSTDSAVNCRGNDLSILVYQGKEQSVYEGGLQPFTEYLYRVIASHEGG
SVYSDWSRGRTTGAAPQSVPTPSRVRLNGYSIEVTWDEPVVRGVIEKYILKAYSEDSTRPPRMP
ASAEFVNTSNLTGILTGLLPFKNYAVTLTACTLAGCTESSHALNISTPQEAPQEVQPPVAKSLPSSLL
SWNPPKKANGIITQYCLYMDGRLIYSGSEENYIVTDLAVFTPHQFLLSACTHVGCNTSSWVLLYTAQL
PPEHVDSPVLTVLDSRTIHIQWKQPRKISGILERYVLYMSNHTHDFTIWSVIYNSTELFQDHMLQYVLP
GNKYLIKLGACTGGGCTVSEASEALTDEDIPEGVPAPKAHSYSPDSFNVSWTEPEYPNGVITSYGLY
LDGILIHNSSELSYRAYGFAPWSLHFRVQACTAKGCALGPLVENRTLEAPPEGTNVNVFKTQGSRK
AHVRWEAPFRPNGLLTHSVLFTGIFYVDPVGNNTLLNVTKVMYSGEETNLWVLIDGLVPFTNYTVQ
VNISNSQGSLLITDPIIAMPPGAPDGVLPRLSSATPTSLQVWVSTPARNNAPGSPRYQLQMRSGDS
THGFLELFSNPSASLSYEVSDLQPYTEYMFRLVASNGFGSAHSSWIPFMTAEDKPGPVPPILLDVK
SRMMLVTWQHPRKSNGVITHYNIYLHGRLYLRTPGNVTNCTVMHLHPYTAYKFQVEACTSKGCSLS
PESQTVWTLPGAPEGIPSELPFSDTPTSIIISWQPPTHPNGLVENFTIERRVKGKEEVTTLVTLPRSH
SMRFIDKTSALSPWTKYEYRVLMSTLHGGTNSSAWVEVTRPSRPAGVQPPVTVLEPDAVQVTW
KPLIQNGDILSYEIHMPDPHITLTNVTSAVLSQKVTHLIPFTNYSVTIVACSGGNGYLGCTESLPTYV
TTHPTVPQNVGPLSVIPLSESYVVISWQPPSKPNGPNLRYELLRRKIQQPLASNPPEDLNRWHNIYS
GTQWLYEDKGLSRFTTYEYMLFVHNSVGFTPSREVTVTTLAGLPERGANLTASVLNHTAIDVRWAK
PTVQDLQGEVEYYTLFWSSATSNDLKLDPVNSHVIGHLKPNTYWFISVFNGVHSINSAGLHATT
CDGEPQGMPLPEVVIINSTAVRVIWTSPPSNPNGVVTEYSIYVNNKLYKTGMNVPGSFILRDLSPFTIYD
IQVEVCTIYACVKSNGTQITTVEDTPSDIPTPTIRGITSRSLQIDWVSPRKPNGIILGYDLLWKTWYPCA
KTQKLVDQDQDELCKAVRCQKPESICGHICYSSEAKVCCNGVLYNPKPGHRCCEEKYIPFVLNSTGV
CCGGRIQEAQPNHQCCSGYYARILPGEVCCPDEQHNRVSVGIGDSCCGRMPYSTSGNQICCAGRL
HDGHGQKCCGRQIVSNDLECCGGEEGVYVNRPLPGMFCCGQDYVNMSDTICCSASSGESKAHIKKN
DPVPVKCCETELIPKSQKCCNGVGYNPLKYVCSDKISTGMMMKETKECRILCPASMEATEHCGRCD
FNFTSHICTVIRGSHNSTGKASIEEMCSSAEETIHTGSVNTYSYTDVNLKPYMTYEYRISAWNSYGRG
LSKAVRARTKEDVPQGVSPPTWTKIDNLEDTIVLNWRKPIQSNGPPIYYILLRNGIERFRGTSLSFSDK
EGIQPFQEYSYQLKACTVAGCATSSKVVAATTQGVPELPPSITALSAVALHLSWSVPEKSNGVIKE
YQIRQVGKGLIHTDTRRQHTVTGLQPYTNYSFTLTACTSAGCTSSEPFLGQTLQAAPEGVWVTPR
HIIINSTTVELYWSLPEKPNGLVSQYQLSRNGNLLFLGGSEEQNFTDKNLEPNSRYTYKLEVKTGGGS
SASDDYIVQTPMSTPEEIYPPYNITVIGPYSIFVAWIPPGILIPEIPVEYNVLLNDGSVTPLAFSVGHHS
TLLENLTPFTQYEIRIQACQNGSCGVSSRMFVKTPAAPMDLNSPVLKALGSACIEIKWMPPEKPNGII
INYFIYRRPAGIEEESVLFVWSEGALEFMDDEGDTLRPFTLYEYRVACNSKGSVESLWSLTQTLEAPP
QDFPAPWAQATSAHSVLLNWTKPESPNGIISHYRVVYQERPDDPTFNSPTVHAFTVKGTSHQAHLY
GLEPFTTYRIGVVAANHAGEILSPWTLIQTLESSPSGLRNRFIVEQKENGRAALLQWSEPMRTNGVIKT
YNIFSDGFLEYSGLNRQFLFRRLDPFTLYTLTLEACTRAGCAHSAPQPLWTDEAPPDSQLAPT VHSV
KSTSVELSWSEPVNPNGKIIRYEVIRRCFEGKAWGNQTIQADEKIVFTEYNTERTFMYNNDTGLQPW
TQCEYKIYTWNSAGHTCSSWNVVRTLQAPPEGLSPPVISYVSMNPQKLLISWIPPEQSNGIIQSYRLQ
RNEMLYPFSDPVTFNNTDEELLPFSTYSYALQACTSGGCSTSKPTSITTEAAPSEVSPDDLWAVS
ATQMNVCWSPPTVQNGKITKYLVRDYNKESLAGQGLCLLVSHLQPYSQYNFSLVACTNNGGCTASVS
KSAWTMEALPENMDSPTLQVTGSEIEITWKPPRNPNGQIRSYELRRDGTIVYTGLETRYRDFTLT
GVEYSYTVTASNSQGGILSPLVKDRTPSPAPSGMEPPKLQARGPQEILVNWDPPVRTNGDIINYTLFI
RELFERETKIIHINTTHNSFGMQSYIVNQLKPFHRYEIRIQACTTLGCASSDWTFIQTPEIAPLMQPPPH
LEVQMAPGGFQPTVSLWLTGPLQPNQKVLVYELYYRRQIATQPRKSNPVLINNGSSTSFIDSELLPFTE
YEYQVWAVNSAGKAPSSWTWCRTGPAPPEGLRAPTFHVISSTQAVVNISAPGKPNQIVSLYRLFSS
SAHGAETVLSEGMATQQTLLHGLQAFNTYSIGVEACTCFNCCSKGPTAELRTHPAPPSGLSSPQIGTL
ASRTASFRWSPPMFPNGVIHSYELQFHVACPPDSALPCTPSQIETKYTGLGQKASLGGLQPYTTYKL
RVVAHNEVGSTASEWISFTTQKELPQYRAPFSVDSNLSVVCVNWSDTFLLNGQLKEYVLTGGRRV
YSGLDTTLYIPRTADKTFFFQVICTTDEGSVKTPLIQYDTSTGLGLVLTTPGKKKGSRSKSTEFYSELW
FIVLMAMLGLILLAIFLSLILQRKIHKEPYIRERPPPLVPLQKRMSPLNVYPPGENHMGGLADTKIPRSGTP



VSIRSNRSACVLRIPSQNQTSLTYSQGSLHRSVSQLMDIQDKKVLMDNSLWEAIMGHNSGLYVDEED
LMNAIKDFSSVTKERTTTFTDTHL

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Usherin (Usher syndrome type IIa protein) (Usher syndrome type-2A protein) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Involved in hearing and vision as member of the USH2 complex. In the inner ear, required for the maintenance of the hair bundle ankle formation, which connects growing stereocilia in developing cochlear hair cells. In retina photoreceptors, the USH2 complex is required for the maintenance of periciliary membrane complex that seems to play a role in regulating intracellular protein transport.

Subcellular Localization: Cell projection, stereocilium membrane ; Single-pass type I membrane protein . Note=Component of the interstereocilia ankle links in the inner ear sensory cells. In photoreceptors, localizes at a plasma membrane microdomain in the apical inner segment that surrounds the connecting cilia called periciliary membrane complex.; [Isoform 2]: Secreted.

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.