

Recombinant Human ABCA1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50006

Size: 10ug, 100ug

Protein Name: Phospholipid-transporting ATPase ABCA1 (EC 7.6.2.1) (ATP-binding cassette sub-family A member 1) (ATP-binding cassette transporter 1) (ABC-1) (ATP-binding cassette 1) (Cholesterol efflux regulatory protein)

Synonym: ABCA1, ABC1, CERP

UniProt ID: O95477

UniProt Link: www.uniprot.org/uniprotkb/O95477/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 2261 AA

Molecular Weight: 254 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MACWPQLRLLLWKNLTFRRRQTCQLLLEVAWPLFIFLILISVRLSYPPYEQHECHFPNKAMPSAGTLP
WVQGIICNANNPCFRYPTPGEAPGVVGNFNKSIVARLFSDARRLLYSQKDTSMKDMRKVLRTLQQI
KKSSSNLKLQDFLVDNETFSGFLYHNLSLPKSTVDKMLRADVILHKVFLQGYQLHLTSLCNGSKSEE
MIQLGDQEVSELCLPREKLAAAERVLRSNMDILKPILRTLNSTSPFPSKELAEATKTLHSLGTLAQE
LFSMRSWSDMRQEVMTNVTNSSSSSTQIYQAVSRIVCGHPEGGLKIKSLNWEYEDNNYKALFGGN
GTEEDAETFYDNSTTPYCNDLMKNLESSPLSRIIWKALKPLLVGKILYTPDTPATRQVMAEVNKTQFQ
LAVFHDLEGMWEELSPKIWTFMENSQEMDLVRMLLDSRDNDHFWEQQLDGLDWTAAQDIVAFLAKH
PEDVQSSNGSVYTWREAFNETNQAIRTSRFMECVNLNKLEPIATEVWLINKSMELDERKFWAGIVF
TGITPGSIELPHHVKYKIRMDIDNVERTNKKIDGYWDPGPRADPFEDMRYVWGGFAYLQDVVEQAIIR
VLTGTEKKTGVYMQMPYPCYVDDIFLRVMSRSMPLFMTLAWIYSVAVIIKGIVYEKEARLKETMRIM
GLDNSILWFSWFISSLIPLLVSAGLLVVILKLGNNLPYSDPSVVFVFLSVFAVVITLQCFLISTLFSRANLA
AACGGIIFYTLYPYVLCVAWQDYVGFTLKIFASLLSPVAFGFGCEYFALFEEQGIGVQWDNLFESPV
EEDGFNLTTSVSMMLFDTFLYGVMTWYIEAVFPGQYGIPRPWYFPCTKSYWFGEESEKSHPGSN
QKRISIEICMEEEPHTLKLGVSIQNLVKVYRDGMKVAVDGLALNFYEGQITSFLGHNGAGKTTTMSILT
GLFPPTSGTAYILGKDIRSEMSTIRQNLGVCPQHNVLFDMLTVEEHIWFYARLKGKSEKHVKAEMEQ
MALDVGLPSSKLKSKTSQSLSGGMQRKLSVALAFVGGSKVVILDEPTAGVDPYSRRGIWELLLKYRQ
GRTIILSTHHMDEADVLDGRIAISHGKLCCVGSSSLFLKNQLGTGYLTLVKKDVESSLSSCRNSSSTV



SYLKKEDSVSQSSSDAGLGSDHESDTLTIDVSAISNLIRKRVSEARLVEDIGHELTYVLPYEAAKEGAF
VELFHEIDRLSDLGISYGISETTLEEFLKVAEESGVDAETSDGTLPARNRRAFGDKQSCLRPFTE
DDAADPNDSIDPESRETDLGSGMDGKGSYQVKGWKL TQQQFVALLWKRLIARRSRKGFFAQIVL
PAVFCIALVFSLIVPPFGKYPSLELQPWMYNEQYTFVSNDAPEDTGTLELLNALT KDPGFGTRCME
GNPIPDTPCQAGEEEWTTAPVPQTIMDLFQNGNWTMQNPSPACQCSSDKIKKMLPVCPPGAGGLP
PPQRKQNTADILQDLTGRNISDYLVKTYVQIIAKSLKNKIWVNEFRYGGFSLGVSNTQALPPSQEVND
AIKQMKHKLKAKDSSADRFLNSLGRFMTGLDTKNNVKVWFNNKGWHAISSFLNVINNAILRANLQK
GENPSHYGITAFNHPLNLTQQLSEVALMTTSDVVLVSICVIFAMSFVPASFVFLIQERVSKAKHLQF
ISGVKPVIIYWLSNFVWDMCNYVVPATLVIIIFICFQQKSYVSSTNLPVLALLLLLYGWSITPLMYPASFV
FKIPSTAYVVLTSVNLFIGINGSVATFVLELFTDNKLNINDILKSVFLIFPHFCLGRGLIDMVKNQAMAD
ALERFGENRFVSPLSWDLVGRNLFAMAVEGVVFFLITVLIQYRFFIRPRPVNAKL SPLNDEDEDVRRE
RQRILDGGGQNDILEIKELTKIYRRKRKPAVDRICVGIPPGECFGLLVNGAGKSSTFKMLTGDTT VT
RGDAFLNKNSILSNIHEVHQNMGYCPQFDAITELLTGREHVEFFALLRGVPEKEVGKVGWEAIRKLGL
VKYGEKYAGNYSGGNKRKLSTAMALIGGPPVFLDEPTTGMDPKARRFLWNCALSVVKEGRSVLT
SHSMEECEALCTRMAMVNGRFRCLGVSQHLKNRFGDGYTIVVRIAGSNPDLKPVQDFFGLAFPGS
VLKEKHRNMLQYQLPSSLSSLARIFSILSQSKRLHIEDYSVSQTTLQVFNFAKDQSDDDHLKDLS
LHKNQTVVDVAVLTSFLQDEKVKESYV

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 Phospholipid-transporting ATPase ABCA1 (EC 7.6.2.1) (ATP-binding cassette sub-family A member 1) (ATP-binding cassette transporter 1) (ABC-1) (ATP-binding cassette 1) (Cholesterol efflux regulatory 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: Catalyzes the translocation of specific phospholipids from the cytoplasmic to the extracellular/lumenal leaflet of membrane coupled to the hydrolysis of ATP (PubMed:24097981, PubMed:35974019). Thereby, participates in phospholipid transfer to apolipoproteins to form nascent high density lipoproteins/HDLs (PubMed:14754908). Transports preferentially phosphatidylcholine over phosphatidylserine (PubMed:24097981). May play a similar role in the efflux of intracellular cholesterol to apolipoproteins and the formation of nascent high density lipoproteins/HDLs (PubMed:10533863, PubMed:14754908, PubMed:24097981, PubMed:35974019). Translocates phospholipids from the outer face of the plasma membrane and forces it through its gateway and annulus into an elongated hydrophobic tunnel in its extracellular domain (PubMed:35974019).

Subcellular Localization: Cell membrane ; Multi-pass membrane protein . Endosome .

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.