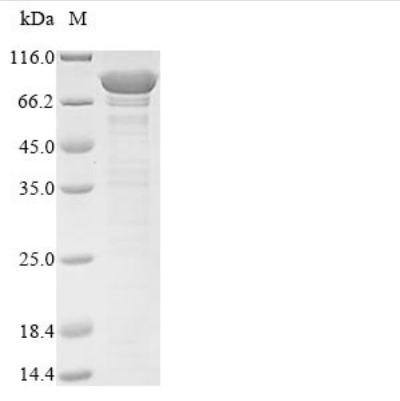
Recombinant Human Vacuolar protein sorting-associated protein 35 (VPS35)

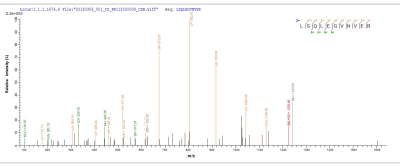
Product Code	CSB-EP839401HU
Relevance	Acts as component of the retromer cargo-selective complex (CSC). The CSC is believed to be the core functional component of retromer or respective retromer complex variants acting to prevent missorting of selected transmembrane cargo proteins into the lysosomal degradation pathway. The recruitment of the CSC to the endosomal membrane involves RAB7A and SNX3. The CSC seems to associate with the cytoplasmic domain of cargo proteins predominantly via VPS35; however, these interactions seem to be of low affinity and retromer SNX proteins may also contribute to cargo selectivity thus questioning the classical function of the CSC. The SNX-BAR retromer mediates retrograde transport of cargo proteins from endosomes to the trans-Golgi network (TGN) and is involved in endosome-to-plasma membrane transport for cargo protein recycling. The SNX3-retromer mediates the retrograde endosome-to-TGN transport of WLS distinct from the SNX-BAR retromer pathway. The SNX27-retromer is believed to be involved in endosome-to-plasma membrane trafficking and recycling of a broad spectrum of cargo proteins. The CSC seems to act as recruitment hub for other proteins, such as the WASH complex and TBC1D5 (Probable). Required for retrograde transport of lysosomal enzyme receptor IGF2R and SLC11A2. Required to regulate transcytosis of the polymeric immunoglobulin receptor (pIgR-pIgA). Required for endosomal localization of WASHC2C. Mediates the association of the CSC with the WASH complex via WASHC2. Required for the endosomal localization of TBC1D5
Abbreviation	VPS35
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	Q96QK1
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	MPTTQQSPQDEQEKLLDEAIQAVKVQSFQMKRCLDKNKLMDALKHASNMLGE LRTSMLSPKSYYELYMAISDELHYLEVYLTDEFAKGRKVADLYELVQYAGNIIPR LYLLITVGVVYVKSFPQSRKDILKDLVEMCRGVQHPLRGLFLRNYLLQCTRNILP DEGEPTDEETTGDISDSMDFVLLNFAEMNKLWVRMQHQGHSRDREKRERER QELRILVGTNLVRLSQLEGVNVERYKQIVLTGILEQVVNCRDALAQEYLMECIIQ VFPDEFHLQTLNPFLRACAELHQNVNVKNIIIALIDRLALFAHREDGPGIPADIKL FDIFSQQVATVIQSRQDMPSEDVVSLQVSLINLAMKCYPDRVDYVDKVLETTVE IFNKLNLEHIATSSAVSKELTRLLKIPVDTYNNILTVLKLKHFHPLFEYFDYESRK SMSCYVLSNVLDYNTEIVSQDQVDSIMNLVSTLIQDQPDQPVEDPDPEDFADE QSLVGRFIHLLRSEDPDQQYLILNTARKHFGAGGNQRIRFTLPPLVFAAYQLAF

	RYKENSKVDDKWEKKCQKIFSFAHQTISALIKAELAELPLRLFLQGALAAGEIGF ENHETVAYEFMSQAFSLYEDEISDSKAQLAAITLIIGTFERMKCFSEENHEPLRT QCALAASKLLKKPDQGRAVSTCAHLFWSGRNTDKNGEELHGGKRVMECLKK ALKIANQCMDPSLQVQLFIEILNRYIYFYEKENDAVTIQVLNQLIQKIREDLPNLE SSEETEQINKHFHNTLEHLRLRRESPESEGPIYEGLIL
Lead Time	3-7 business days
Research Area	Signal Transduction
Source	E.coli
Gene Names	VPS35
Protein Names	Maternal-embryonic 3 Vesicle protein sorting 35 MEM3
Expression Region	1-796aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 10xHis-tagged and C-terminal Myc-tagged
Mol. Weight	96.7 kDa
Protein Description	Full Length

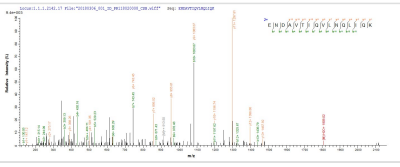
Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.



Based on the SEQUEST from database of E.coli host and target protein, the LC-MS/MS Analysis result of CSB-EP839401HU could indicate that this peptide derived from E.coli-expressed Homo sapiens (Human) VPS35.



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Description

Amino acids 1-796 form the expressed segment for recombinant Human VPS35. This VPS35 protein is expected to have a theoretical molecular weight of 96.7 kDa. This VPS35 recombinant protein is manufactured in e.coli. Fusion of the N-terminal 10xHis tag and C-terminal Myc tag into the VPS35 encoding

gene fragment was conducted, allowing for easier detection and purification of the VPS35 protein in subsequent stages.

Human vacuolar protein sorting-associated protein 35 (VPS35) is integral in retrograde transport within the endosome-to-Golgi retrieval pathway. VPS35 is a core component of the retromer complex, responsible for recycling proteins from endosomes to the trans-Golgi network, thus maintaining cellular homeostasis. In the realms of cellular and molecular research, exploring VPS35 provides valuable insights into the intricacies of intracellular trafficking and organelle dynamics. VPS35 mutations are linked to neurodegenerative disorders, implicating it in neuroscience research. Investigating VPS35 offers potential applications in understanding cellular trafficking processes, neurobiology, and developing therapeutic strategies for conditions associated with impaired retrograde transport, including certain neurodegenerative diseases.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.