# Ap-4 Complex Subunit Sigma-1 (AP4S1) Human Recombinant Protein

## PRODUCT OVERVIEW

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| **Product Name** | AP-4 complex subunit sigma-1 (AP4S1), Recombinant Protein |
| **Full Product Name** | Recombinant Human AP-4 complex subunit sigma-1 (AP4S1) |
| **Product Gene Name** | AP4S1 recombinant protein |
| **Product Synonym Gene Name** | AP4S1 |
| **Sequence** | MIKFFLMVNK QGQTRLSKYY EHVDINKRTL LETEVIKSCL SRSNEQCSFI EYKDFKLIYR QYAALFIVVG VNDTENEMAI YEFIHNFVEV LDEYFSRVSE LDIMFNLDKV HIILDEMVLN GCIVETNRAR ILAPLLILDK MSES |
| **Host** | E Coli or Yeast or Baculovirus or Mammalian Cell |
| **Form/Format** | Lyophilized or liquid (Format to be determined during the manufacturing process) |
| **Purity/Purification** | Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific) |
| **Preparation and Storage** | Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended. |
| **Molecular Weight** | 17,384 Da |
| **Sequence Positions** | 1-144, Full length protein |
| **Tag Information** | This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information. |
| **Sterility** | Sterile filter available upon request. |
| **Endotoxin** | Low endotoxin available upon request. |
| **OMIM** | 607243 |
| **3D Structure** | ModBase 3D Structure for Q9Y587 |
| **Species** | Human |
| **ISO Certification** | Manufactured in an ISO 9001:2015 Certified Laboratory. |
| **Related Product Information for AP4S1 recombinant protein** | MBS1421213 is a recombinant protein targeting AP4S1. Also known as Recombinant Human AP-4 complex subunit sigma-1 (AP4S1). Host: E Coli or Yeast or Baculovirus or Mammalian Cell. |
| **Other Notes** | Small volumes of AP4S1 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for AP4S1. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 189409104 |
| **NCBI GeneID** | 11154 |
| **NCBI Accession #** | NP_001121598.1 |
| **UniProt Primary Accession #** | Q9Y587 |
| **UniProt Secondary Accession #** | Q6IAQ4; Q86U36; Q9BVE7; G3V2N8 |

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| **UniProt Related Accession #** | Q9Y587 |
| **GenBank Nucleotide #** | NM_001128126.2 |
| **NCBI Official Full Name** | AP-4 complex subunit sigma-1 isoform 2 |
| **NCBI Official Synonym Full Names** | adaptor related protein complex 4 sigma 1 subunit |
| **NCBI Official Symbol** | AP4S1 |
| **NCBI Official Synonym Symbols** | AP47B; CLA20; CPSQ6; SPG52; CLAPS4 |
| **UniProt Protein Name** | AP-4 complex subunit sigma-1 |
| **UniProt Synonym Protein Names** | AP-4 adaptor complex subunit sigma-1; Adaptor-related protein complex 4 subunit sigma-1; Sigma-1 subunit of AP-4; Sigma-4-adaptin; Sigma4-adaptin |
| **Protein Family** | AP-4 complex |
| **UniProt Gene Name** | AP4S1 |
| **UniProt Synonym Gene Names** | Sigma4-adaptin |
| **NCBI Protein Information** | AP-4 complex subunit sigma-1 |
| **NCBI Summary for AP4S1** | This gene encodes a member of the adaptor complexes small subunit protein family. These proteins are components of the heterotetrameric adaptor protein complexes, which play important roles in the secretory and endocytic pathways by mediating vesicle formation and sorting of integral membrane proteins. The encoded protein is the small subunit of adaptor protein complex-4, which is associated with both clathrin- and nonclathrin-coated vesicles. Mutations in this gene are associated with spastic quadriplegic cerebral palsy-6. Alternatively spliced transcript variants encoding multiple isoforms have been observed for this gene, and a pseudogene of this gene is located on the long arm of chromosome 6. [provided by RefSeq, Dec 2011] |
| **UniProt Comments for AP4S1** | Component of the adaptor protein complex 4 (AP-4). Adaptor protein complexes are vesicle coat components involved both in vesicle formation and cargo selection. They control the vesicular transport of proteins in different trafficking pathways (PubMed:10066790, PubMed:10436028). AP-4 forms a non clathrin-associated coat on vesicles departing the trans-Golgi network (TGN) and may be involved in the targeting of proteins from the trans-Golgi network (TGN) to the endosomal-lysosomal system. It is also involved in protein sorting to the basolateral membrane in epithelial cells and the proper asymmetric localization of somatodendritic proteins in neurons. AP-4 is involved in the recognition and binding of tyrosine-based sorting signals found in the cytoplasmic part of cargos, but may also recognize other types of sorting signal (Probable). |
| **Research Articles on AP4S1** | **1.** Identification of mutations in AP4S1/SPG52 in hereditary spastic paraplegia. |
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