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SORT1 Antibody (Center) Blocking peptide

Synthetic peptide
Catalog # BP11584c

Specification

SORT1 Antibody (Center) Blocking peptide - Product Information

Primary Accession Q99523

SORT1 Antibody (Center) Blocking peptide - Additional Information

Gene ID 6272

Other Names
Sortilin, 100 kDa NT receptor, Glycoprotein 95, Gp95, Neurotensin receptor 3, NT3, NTR3, SORT1

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

SORT1 Antibody (Center) Blocking peptide - Protein Information

Name SORT1 (HGNC:11186)

Function
Functions as a sorting receptor in the Golgi compartment and as a clearance receptor on the cell surface. Required for protein transport from the Golgi apparatus to the lysosomes by a pathway that is independent of the mannose-6-phosphate receptor (M6PR). Lysosomal proteins bind specifically to the receptor in the Golgi apparatus and the resulting receptor-ligand complex is transported to an acidic prelysosomal compartment where the low pH mediates the dissociation of the complex (PubMed:16787399). The receptor is then recycled back to the Golgi for another round of trafficking through its binding to the retromer. Also required for protein transport from the Golgi apparatus to the endosomes. Promotes neuronal apoptosis by mediating endocytosis of the proapoptotic precursor forms of BDNF (proBDNF) and NGFB (proNGFB). Also acts as a receptor for neurotensin. May promote mineralization of the extracellular matrix during osteogenic differentiation by scavenging extracellular LPL. Probably required in adipocytes for the formation of specialized storage vesicles containing the glucose transporter SLC2A4/GLUT4 (GLUT4 storage vesicles, or GSVs). These vesicles provide a stable pool of SLC2A4 and confer increased responsiveness to insulin. May also mediate transport from the endoplasmic reticulum to the Golgi.

Cellular Location

Golgi apparatus, Golgi stack membrane; Single-pass type I membrane protein. Endosome membrane; Single-pass type I membrane protein. Endoplasmic reticulum membrane; Single- pass type I membrane protein. Nucleus membrane; Single-pass type I membrane protein. Cell membrane; Single-pass type I membrane protein; Extracellular side Lysosome membrane; Single-pass type I membrane protein. Note=Localized to membranes of the endoplasmic reticulum, endosomes, Golgi stack, lysosomes and nucleus. A small fraction of the protein is also localized to the plasma membrane. May also be found in SLC2A4/GLUT4 storage vesicles (GSVs) in adipocytes Localization to the plasma membrane in adipocytes may be enhanced by insulin

Tissue Location
Expressed in brain and prostate (at protein level). Expressed at high levels in brain, spinal cord, heart, skeletal muscle, thyroid, placenta and testis. Expressed at lower levels in lymphoid organs, kidney, colon and liver.

SORT1 Antibody (Center) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

SORT1 Antibody (Center) Blocking peptide - Images

SORT1 Antibody (Center) Blocking peptide - Background

This gene encodes a protein that is a multi-ligand type-1receptor with similarity to the yeast carboxypeptidase Y sortingreceptor Vps10 protein. The encoded protein, a trans-Golgi network(TGN) transmembrane protein, binds a number of unrelated ligandsthat participate in a wide range of cellular processes; however, itlacks the typical features of a signalling receptor. In the TGN,furin mediates the activation of the mature binding form. Theencoded protein consists of a large luminal domain, a singletransmembrane segment and short C-terminal cytoplasmic tail. Theluminal domain contains a cysteine-rich region similar to twocorresponding segments in the yeast Vps10p; the cytoplasmic tail issimilar to the corresponding segment of the cation-independentmannose 6-phosphate receptor and the tail also interacts with theVHS domains of GGA (Golgi-associated, gamma-adaptin homologous,ARF-interacting) proteins.

SORT1 Antibody (Center) Blocking peptide - References

Hu, M., et al. Pharmacogenet. Genomics 20(10):634-637(2010)Kjolby, M., et al. Cell Metab. 12(3):213-223(2010)Musunuru, K., et al. Nature 466(7307):714-719(2010)Teslovich, T.M., et al. Nature 466(7307):707-713(2010)Johnatty, S.E., et al. PLoS Genet. 6 (7), E1001016 (2010) :