Neurotensin Receptor 3 (NTR3, Sortilin, 100kD NT Receptor, Glycoprotein 95, Gp95, NT3, OTTHUMP00000013784, Sortilin 1, Sortilin-1, SORT1)

Catalog number

N2177-52A

Supplier

United States Biological

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). 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. SUBUNIT: Interacts with LPL and SLC2A4. Interacts with the cytosolic adapter proteins GGA1 and GGA2. Interacts with numerous ligands including the receptor-associated protein LRPAP1/RAP, GM2A and PSAP. Forms a complex with NGFR which binds specifically to the precursor forms of NGFB (proNGFB) and BDNF (proBDNF).

Cellular Localization

Membrane; single-pass type I membrane protein. 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 Specificity

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. During osteoblast differentiation.

Domain

The N-terminal propeptide may facilitate precursor transport within the Golgi stack. Intrachain binding of the N-terminal propeptide and the extracellular domain may also inhibit premature ligand binding. The extracellular domain may be shed following protease cleavage in some cell types. PTM: The N-terminal propeptide is cleaved by furin and possibly other homologous proteases. PTM: Contains 8 intrachain disulfide bonds. PTM: N-glycosylated. Contains 9 BNR repeats.

Applications

Suitable for use in Immunohistochemistry. Other applications not tested.

Recommended Dilution

Optimal dilutions to be determined by the researcher.

Storage and Stability

May be stored at 4°C for short-term only. For long-term storage and to avoid repeated freezing and thawing, aliquot Store at -20°C. Aliquots are stable for at least 12 months at -20°C. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap. Further dilutions can be made in assay buffer.

Immunogen

Extracellular domain of glycosylated human sortilin produced in CHO cells was used as the immunogen.

Formulation

Supplied as a lyophilized powder. Reconstitute in 100ul of sterile water.

Purity

Serum

Specificity

Specificity was demonstrated by immunohistochemistry. Species Crossreactivity: Reacts with human, rat and mouse Sortilin. Other species not yet tested.

Product Type

Pab

Source

human

Isotype

IgG

Grade

Serum

Applications

IHC

Crossreactivity

Hu Mo Rt

Storage

-20°C

Reference

1. Chen ZY, et al. J. Neurosci. 25(26) pp 6156-6166. ; 2. Mazella J, et al. (2001). Cell Signal 13 pp 1-6.