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ROBO1 Blocking Peptide (C-Term)

Synthetic peptide
Catalog # BP21950b

Specification

ROBO1 Blocking Peptide (C-Term) - Product Information

Primary Accession Q9Y6N7

ROBO1 Blocking Peptide (C-Term) - Additional Information

Gene ID 6091

Other Names
Roundabout homolog 1, Deleted in U twenty twenty, H-Robo-1, ROBO1, DUTT1

Target/Specificity
The synthetic peptide sequence is selected from aa 1117-1130 of HUMAN ROBO1

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.

ROBO1 Blocking Peptide (C-Term) - Protein Information

Name ROBO1

Synonyms DUTT1

Function
Receptor for SLIT1 and SLIT2 that mediates cellular responses to molecular guidance cues in cellular migration, including axonal navigation at the ventral midline of the neural tube and projection of axons to different regions during neuronal development (PubMed:10102268, PubMed:24560577). Interaction with the intracellular domain of FLRT3 mediates axon attraction towards cells expressing NTN1 (PubMed:24560577). In axon growth cones, the silencing of the attractive effect of NTN1 by SLIT2 may require the formation of a ROBO1-DCC complex (By similarity). Plays a role in the regulation of cell migration via its interaction with MYO9B; inhibits MYO9B-mediated stimulation of RHOA GTPase activity, and thereby leads to increased levels of active, GTP-bound RHOA (PubMed:26529257). May be required for lung development (By similarity).

Cellular Location
Cell membrane; Single-pass type I membrane protein. Cell projection, axon {ECO:0000250|UniProtKB:O89026}. Endoplasmic reticulum-Golgi intermediate compartment membrane {ECO:0000250|UniProtKB:O55005}; Single-pass membrane protein {ECO:0000250|UniProtKB:O55005} Note=Detected at growth cones in thalamus neurons. Detected at growth cones in thalamus neurons (By similarity). PRRG4 prevents cell surface location and both colocalize in the Endoplasmic reticulum/Golgi adjacent to the cell nucleus (By similarity) {ECO:0000250|UniProtKB:O55005, ECO:0000250|UniProtKB:O89026}

Tissue Location
Widely expressed, with exception of kidney.

ROBO1 Blocking Peptide (C-Term) - Protocols

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

- Blocking Peptides

ROBO1 Blocking Peptide (C-Term) - Images

ROBO1 Blocking Peptide (C-Term) - Background

Receptor for SLIT1 and SLIT2 which are thought to act as molecular guidance cue in cellular migration, including axonal navigation at the ventral midline of the neural tube and projection of axons to different regions during neuronal development. In axon growth cones, the silencing of the attractive effect of NTN1 by SLIT2 may require the formation of a ROBO1-DCC complex. May be required for lung development.

ROBO1 Blocking Peptide (C-Term) - References

Kidd T.,et al.Cell 92:205-215(1998).
Muzny D.M.,et al.Nature 440:1194-1198(2006).
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.
Bechtel S.,et al.BMC Genomics 8:399-399(2007).
Brose K.,et al.Cell 96:795-806(1999).