TRAK1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	TRAK1, Polyclonal Antibody
Full Product Name	TRAK1 Antibody
Product Gene Name	anti-TRAK1 antibody
Product Synonym Names	106 kDa O GlcNAc transferase interacting protein; KIAA1042; OGT(O Glc NAc transferase) interacting protein 106 KDa; OIP106; Trafficking kinesin binding protein 1; Trafficking protein kinesin binding 1; TRAK 1
Clonality	Polyclonal
Isotype	Rabbit IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin (Thermo Fisher Scientific).
Concentration	1mg/ml (lot specific)
Specificity	TRAK1 Antibody detects endogenous levels of total TRAK1.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.
Antibody/Peptide Pairs	TRAK1 peptide (MBS9631791) is used for blocking the activity of TRAK1 antibody (MBS9629408)
Molecular Weight	63,642 Da
OMIM	608112
3D Structure	ModBase 3D Structure for Q9UPV9
Supply Chain Verification	Manufactured in a lab with traceable raw materials manufactured on site. Coordinated product portfolio of antibodies, pairs, conjugates, recombinant proteins, and immunoassay materials available, please inquire.
Immunogen	A synthesized peptide derived from Human MYOCD.
Conjugation	Unconjugated
Similarity	The C-terminal region is required for the early endosomal and mitochondrial localization. Belongs to the milton family.
Post Translational Modifications	O-glycosylated. Glycosylated by OGT; glycosylation in response to increased extracellular glucose levels is required for and leads to regulation of mitochondrial motility by OGT.
Subunit Structure	Interacts with RHOT1 and RHOT2. Found in a complex with KIF5B, OGT, RHOT1 and RHOT2. Interacts with HGS. Interacts with GABRA1 (By similarity). Interacts with KIF5C. Interacts with OGT; stable interaction is not required for glycosylation of this protein by OGT. Isoform 1 interacts with OGT.
Tissue Specificity	High expression in spinal cord and moderate expression in all other tissues and specific brain regions examined. Expressed in all cell lines examined.

Function	Involved in the regulation of endosome-to-lysosome trafficking, including endocytic trafficking of EGF-EGFR complexes and GABA-A receptors. Involved in mitochondrial motility. When O-glycosylated, abolishes mitochondrial motility. Crucial for recruiting OGT to the mitochondrial surface of neuronal processes. TRAK1 and RHOT form an essential protein complex that links KIF5 to mitochondria for light chain-independent, anterograde transport of mitochondria (By similarity).
Note	Predominantly associated with early endosome. The localization to early endosomes depends on its interaction with HGS/HRS (PubMed:18675823). Colocalizes with MGARP at the mitochondria (PubMed:19528298).
Product Categories/Family for anti-TRAK1 antibody	Cytoplasm; Nucleus; Mitochondrion; Early endosome; Endosome; Mitochondrion membrane; Cell cortex; Primary
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-TRAK1 antibody	ELISA (EIA)(peptide)
Application Notes for anti-TRAK1 antibody	ELISA(peptide): 1:20000-1:40000
Related Product Information for anti-TRAK1 antibody	MBS9629408 is an antibody targeting TRAK1. Also known as TRAK1 Antibody. Reactive in Human, Mouse, Rat. Host: Rabbit.
Other Notes	Small volumes of anti-TRAK1 antibody 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 TRAK1. It may not necessarily be applicable to this product.

NCBI GI #	111074532
NCBI GeneID	22906
NCBI Accession #	NP_001036111.1
UniProt Primary Accession #	Q9UPV9
UniProt Secondary Accession #	Q63HR0; Q659B5; Q96B69; E9PDS2; J3KNT7
UniProt Related Accession #	Q9UPV9
GenBank Nucleotide #	NM_001042646.2
NCBI Official Full Name	trafficking kinesin-binding protein 1 isoform 1
NCBI Official Synonym Full Names	trafficking kinesin protein 1
NCBI Official Symbol	TRAK1
NCBI Official Synonym Symbols	MILT1; OIP106
UniProt Protein Name	Trafficking kinesin-binding protein 1
UniProt Synonym Protein Names	106 kDa O-GlcNAc transferase-interacting protein
Protein Family	Trafficking kinesin-binding protein
UniProt Gene Name	TRAK1
UniProt Synonym Gene Names	KIAA1042; OIP106
UniProt Entry Name	TRAK1_HUMAN
NCBI Protein Information	trafficking kinesin-binding protein 1
Research Articles on TRAK1	**1.** This study showed that the TRAK1 was prevalently localized in axons of hippocampal and cortical neurons.

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