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Product Information

Recombinant Anti-Human ntrk1 Antibody Fab Fragment

Cat. No.: **MOM-18514-F(E)**
This product is for research use only and is not intended for diagnostic use.

Product Overview

Recombinant Mouse Antibody Fab Fragment specifically binds to Human NTRK1, expressed in Chinese Hamster Ovary cells(CHO)

Antigen Description

Receptor tyrosine kinase involved in the development and the maturation of the central and peripheral nervous systems through regulation of proliferation, differentiation and survival of sympathetic and nervous neurons. High affinity receptor for NGF which is its primary ligand, it can also bind and be activated by NTF3/neurotrophin-3. However, NTF3 only supports axonal extension through NTRK1 but has no effect on neuron survival. Upon dimeric NGF ligand-binding, undergoes homodimerization, autophosphorylation and activation. Recruits, phosphorylates and/or activates several downstream effectors including SHC1, FRS2, SH2B1, SH2B2 and PLCG1 that regulate distinct overlapping signaling cascades driving cell survival and differentiation. Through SHC1 and FRS2 activates a GRB2-Ras-MAPK cascade that regulates cell differentiation and survival. Through PLCG1 controls NF-Kappa-B activation and the transcription of genes involved in cell survival. Through SHC1 and SH2B1 controls a Ras-PI3 kinase-AKT1 signaling cascade that is also regulating survival. In absence of ligand and activation, may promote cell death, making the survival of neurons dependent on trophic factors.Isoform TrkA-III is resistant to NGF, constitutively activates AKT1 and NF-kappa-B and is unable to activate the Ras-MAPK signaling cascade. Antaggedonizes the anti-proliferative NGF-NTRK1 signaling that promotes neuronal precursors differentiation. Isoform TrkA-III promotes angiogenesis and has oncogenic activity when overexpressed.

Specific Activity

Tested positive against native antigen.

Target

NTRK1

Immunogen

Purified recombinant extracellular fragment of Human TrkA (aa33-423) fused with hIgGFc tagged expressed in HEK293 cell line.

Source

Mouse

Species Reactivity

Human

Type

Fab

Expression Host

CHO

Purity

>95.0%. Determined by analysis by RP-HPLC & analysis by SDS-PAGE.

Applications

Suitable for use in FC, IP, ELISA, Neut, FuncS, IF and most other immunological methods.

Storage

Store it under sterile conditions at -20°C upon receiving. Recommend to pack the protein into smaller quantities for optimal storage.

ANTIGEN GENE INFOMATION

Gene Name

NTRK1 neurotrophic tyrosine kinase, receptor, type 1 [Homo sapiens]

Official Symbol

NTRK1

Synonyms

NTRK1; neurotrophic tyrosine kinase, receptor, type 1; high affinity nerve growth factor receptor; MTC; TRK; TRKA; gp140trk; Oncogene TRK; tyrosine kinase receptor A; tropomyosin-related kinase A; TRK1-transforming tyrosine kinase protein; TRK1; Trk-A; p140-TrkA; DKFZp781I14186

Gene ID

4914

mRNA Refseq

NM_001007792

Protein Refseq

NP_001007793

MIM

191315

UniProt ID

P04629

Chromosome Location

1q21-q22

Pathway

ARMS-mediated activation, organism-specific biosystem; Activation of TRKA receptors, organism-specific biosystem; Apoptosis, organism-specific biosystem; Apoptosis, conserved biosystem; Endocytosis, organism-specific biosystem; Endocytosis, conserved biosystem; Frs2-mediated activation, organism-specific biosystem;

Function

ATP binding; nerve growth factor binding; NOT nerve growth factor binding; nerve growth factor receptor activity; neurotrophin binding; nucleotide binding; protein binding; protein homodimerization activity; receptor activity; transmembrane receptor protein tyrosine kinase activity;

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