

## TrkA Active Protein | NTRK1 active protein

TrkA Protein, Mouse, Recombinant (His Tag)

CATALOG #  
**AAA258230**

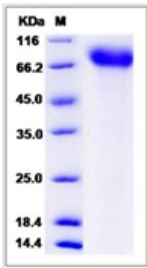
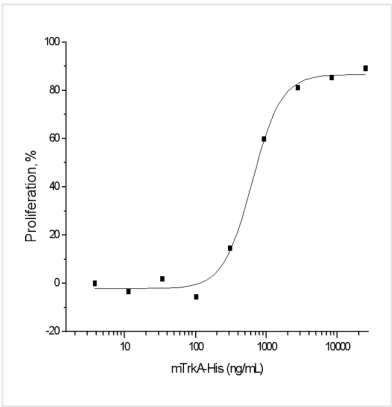
HOST  
**HEK293 Cells**

### PRODUCT SYNONYMS

TrkA; TrkA Protein; Mouse; Recombinant (His Tag); Mouse TrkA/NTRK1 Protein (His Tag); C80751 Protein; Tkr Protein; trk Protein; neurotrophic tyrosine kinase; receptor; type 1; NTRK1 active protein

### PRODUCT SPECIFICATIONS

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                    | HEK293 Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Purity/Purification     | >95% as determined by SDS-PAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Form/Format             | Lyophilized from sterile PBS, pH7.4. Normally 5%-8% trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the hard copy of CoA.                                                                                                                                                                                                                                                                                               |
| Sequence                | Met1-Gly42 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Species                 | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Activity                | Measured by its ability to inhibit NGF-induced proliferation of TF?1 human erythroleukemic cells. The ED50 for this effect is typically 0.2-1ug/mL in the presence of 10ng/mL of recombinant mouse NGF.                                                                                                                                                                                                                                                                                                          |
| Endotoxin               | <1.0EU per ug of the protein as determined by the LAL method                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Predicted N Terminal    | Ala 34                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Tag                     | C-His                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Protein Construction    | A DNA sequence encoding the mouse NTRK1 (NP_001028296.1)(Met1-Gly420) was expressed with a C-terminal polyhistidine tag.                                                                                                                                                                                                                                                                                                                                                                                         |
| Reconstitution          | A hardcopy of COA with reconstitution instruction is sent along with the products. Please refer to it for detailed information.                                                                                                                                                                                                                                                                                                                                                                                  |
| Preparation and Storage | <p>Samples are stable for up to twelve months from date of receipt at -20 degree C to -80 degree C. Store it under sterile conditions at -20 degree C to -80 degree C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.</p> <p>In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice.</p> |



SDS-PAGE

**Application Data**  
Measured by its ability to inhibit NGF-induced proliferation of TF-1 human erythroleukemic cells. The ED50 for this effect is typically 0.2-1 ug/mL in the presence of 10 ng/mL of recombinant mouse NGF.

ADDITIONAL INFORMATION

|                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for NTRK1 active protein | Background: TRKA is a member of the neurotrophic tyrosine kinase receptor (NTRK) family. It is a membrane-bound receptor that, upon neurotrophin binding, phosphorylates itself and members of the MAPK pathway. Isoform TrkA-III promotes angiogenesis and has oncogenic activity when overexpressed. Isoform TrkA-I is found in most non-neuronal tissues. Isoform TrkA-II is primarily expressed in neuronal cells. TrkA-III is specifically expressed by the pluripotent neural stem and neural crest progenitors. The presence of NTRK1 leads to cell differentiation and may play a role in specifying sensory neuron subtypes. Mutations in the TRKA gene have been associated with congenital insensitivity to pain, anhidrosis, self-mutilating behavior, mental retardation, and cancer. It was originally identified as an oncogene as it is commonly mutated in cancers, particularly colon and thyroid carcinomas. TRKA is required for high-affinity binding to nerve growth factor (NGF), neurotrophin-3 and neurotrophin-4/5 but not brain-derived neurotrophic factor (BDNF). Known substrates for the Trk receptors are SHC1, PI 3-kinase, and PLC-gamma-1. NTRK1 has a crucial role in the development and function of the nociceptive reception system as well as the establishment of thermal regulation via sweating. It also activates ERK1 by either SHC1- or PLC-gamma-1-dependent signaling pathway. Defects in NTRK1 are a cause of congenital insensitivity to pain with anhidrosis and thyroid papillary carcinoma. |
| Product Categories/Family for NTRK1 active protein   | Cancer Drug Targets Receptor Tyrosine Kinases (RTKs)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| References                                           | Lambiase A, et al. (2005) Molecular basis for keratoconus: lack of TrkA expression and its transcriptional repression by Sp3. Natl Acad Sci. 102 (46):16795-800.<br>Benito-Gutia@rrez E, et al. (2006) Origin and evolution of the Trk family of neurotrophic receptors. Mol Cell Neurosci. 31(2):179-92.<br>Martin-Zanca D, et al. (1986) A human oncogene formed by the fusion of truncated tropomyosin and protein tyrosine kinase sequences. Nature. 319(6056):743-8.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

NCBI AND UNIPROT INFORMATION

|                                  |                                                |
|----------------------------------|------------------------------------------------|
| NCBI GI #                        | 169234626                                      |
| NCBI GeneID                      | 18211                                          |
| NCBI Accession #                 | NP_001028296.1                                 |
| NCBI GenBank Nucleotide #        | NM_001033124.1                                 |
| UniProt Accession #              | Q3UFB7                                         |
| Molecular Weight                 | 87,738 Da                                      |
| NCBI Official Full Name          | high affinity nerve growth factor receptor     |
| NCBI Official Synonym Full Names | neurotrophic tyrosine kinase, receptor, type 1 |

|                               |                                            |
|-------------------------------|--------------------------------------------|
| NCBI Official Symbol          | Ntrk1                                      |
| NCBI Official Synonym Symbols | Tkr; trk; TrkA; C80751                     |
| NCBI Protein Information      | high affinity nerve growth factor receptor |
| UniProt Protein Name          | High affinity nerve growth factor receptor |
| UniProt Gene Name             | <b>Ntrk1</b>                               |
| UniProt Entry Name            | NTRK1_MOUSE                                |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/hek293-cells-ntrk1-active-protein/trka/258230>