

## Recombinant Rabbit NTRK1 Protein, His-tagged, Alexa Fluor 488 conjugated

**Cat. No.** NTRK1-509RAF488    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| <b>Product Overview</b> | Alexa Fluor 488 conjugated recombinant Rabbit NTRK1 (XP_008262512.1) (Ala33-Glu414) was expressed with a polyhistidine tag at the C-terminus.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Species</b>          | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Source</b>           | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>ProteinLength</b>    | Ala33-Glu414 393                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Description</b>      | <p>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 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 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</p> |

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and function of the n centigradeiceptive reception system as well as 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.

|                                     |                                                                                                                                                                                                                                                        |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Form</b>                         | Lyophilized                                                                                                                                                                                                                                            |
| <b>Molecular Mass</b>               | 43.4 kDa                                                                                                                                                                                                                                               |
| <b>N-terminal Sequence Analysis</b> | Ala 33                                                                                                                                                                                                                                                 |
| <b>Endotoxin</b>                    | < 1.0 EU/ µg protein as determined by the LAL method.                                                                                                                                                                                                  |
| <b>Purity</b>                       | > 95 % as determined by SDS-PAGE                                                                                                                                                                                                                       |
| <b>Characteristic</b>               | Disulfide-linked homodimer<br>Labeled with Alexa Fluor 488 via amines<br>Excitation Wavelength: 488 nm<br>Emission Wavelength: 515-545 nm                                                                                                              |
| <b>Storage</b>                      | Samples are stable for up to twelve months from date of receipt at -70 centigrade. Store it under sterile conditions at -20 to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. |
| <b>Storage Buffer</b>               | Lyophilized from sterile PBS, pH 7.4. Normally 5%-8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.                                                                                                            |
| <b>Reconstitution</b>               | It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 µg/µL. Centrifuge the vial at 4 centigrade before opening to recover the entire contents.                                                                 |

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**Conjugation** Alexa Fluor 488

## GENE INFORMATION

**Gene Name** NTRK1 neurotrophic tyrosine kinase, receptor, type 1 [ *Oryctolagus cuniculus* ]

**Official Symbol** NTRK1

**Synonyms** NTRK1; neurotrophic tyrosine kinase, receptor, type 1;

**Gene ID** 100354292

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