# Rabbit Antibody to TrkB (phospho Y816/Y817): Affinity Purified

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| **Catalogue No.:** | R-1717-50 |
| **Description:** | The protein named TrkB (also named Neurotrophic tyrosine kinase receptor type 2 (NTRK2), GP145-TrkB or Tropomyosin-related kinase B is a receptor tyrosine kinase involved in the development and the maturation of the central and the peripheral nervous systems and is important in the regulation of neuron survival, proliferation, migration, differentiation, and synapse formation and plasticity. TrkB may also play a role in neutrophin-dependent calcium signaling in glial cells and mediate communication between neurons and glia. TrkB is the primary receptor for BDNF (brain-derived neurotrophic factor. TrkB also binds NT4 and NT3 but less efficiently. Upon ligand-binding, the receptor undergoes homodimerization, autophosphorylation and activation. TrkB activation recruits, phosphorylates and/or activates several downstream effectors including SHC1, FRS2, SH2B1, SH2B2 and PLCG1 that each regulate distinct overlapping signaling cascades within cells. Through SHC1, FRS2, SH2B1, SH2B2, these activate the GRB2-Ras-MAPK cascade that regulates, for instance, neuronal differentiation including neurite outgrowth. These same effectors also control the Ras-PI3 kinase-AKT1 signaling cascade that mainly regulates growth and survival. TrkB, via activation of PLCG1 and the downstream protein kinase C-regulated pathways, also controls synaptic plasticity, and thus plays a role in learning and memory by regulating both short term synaptic function and long-term potentiation. PLCG1 also leads to NF-Kappa-B activation and the transcription of genes involved in cell survival. One such consequence is that PLCG1 activation via TrkB is able to suppress anoikis, the apoptosis resulting from loss of cell-matrix interactions. (Reference: www.uniprot.org) |
| **Related products:** | Rabbit Antibody to TrkB (phospho S478/S479): Affinity Purified |
| **Batch No.:** | See product label |
| **Unit size:** | 50 ug |
| **Antigen:** | Synthetic peptide immunogen, AKASPV[pY]LDILG |
| **Sequence:** | AKASPV[pY]LDILG |
| **Antigen Location:** | Corresponds to:<br>811AKASPVYLDILG822 in human TrkB. Phosphorylated Tyrosine target is amino acid number 817 in human.<br>and<br>810AKASPVYLDILG821 in Uniprot# Q63604 (NTRK2_RAT) for rat and Uniprot# P15209 (NTRK2_MOUSE) for mouse. Phosphorylated Tyrosine target is amino acid number 816 in Rat and Mouse. |
| **Other Names:** | GP145-TrkB; Neurotrophic tyrosine kinase receptor type 2; TrkB tyrosine kinase; Tropomyosin-related kinase B |
| **Accession:** | Q16620 NTRK2_HUMAN |
| **Produced in:** | Rabbit |
| **Purity:** | Affinity purified, and absorbed. |

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| **Applications:** | Western Blotting (0.5 - 2 ug/mL). Highly purified BSA is recommended for membrane blocking.Other applications have not been tested. Biosensis recommends optimal dilutions/concentrations should be determined by the end user. |
| **Specificity:** | Human. |
| **Cross-reactivity:** | Human. Other species not yet tested but it is predicted to react with mouse, rat and chicken TrkB-pY816/817 based on amino acid homology at the site. |
| **Form:** | Lyophilized from PBS, pH 7.2-7.6, without preservatives. |
| **Reconstitution:** | Spin vial briefly before opening. Reconstitute in 50 uL sterile distilled water. Centrifuge to remove any insoluble material. Final buffer contains no preservatives. |
| **Storage:** | Store lyophilised antibody at 2-8C. After reconstitution divide into aliquots and store at -20C for long-term storage. Store at 2-8C short-term (up to 4 weeks) with an appropriate antibacterial agent. Avoid repetitive freeze/thaw cycles. |
| **Expiry Date:** | 12 months after purchase if unopened. |

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