

画像数 1

製品名	Rat TrkA ELISA Kit
検出方法	Colorimetric
サンプルの種類	Cell culture supernatant, Cell Lysate, Tissue Homogenate
アッセイタイプ	Sandwich (quantitative)
検出感度	< 10 pg/ml
検出範囲	31.2 pg/ml - 2000 pg/ml
ステップ	Multiple steps standard assay
種交差性	交差種: Rat
製品の概要	Abcam's rat TrkA <i>in vitro</i> ELISA (Enzyme-Linked Immunosorbent Assay) kit is designed for the accurate quantitative measurement of rat TrkA in cell culture supernatants, cell lysates and tissue homogenates.

A TrkA specific rat polyclonal antibody from goat has been precoated onto 96-well plates. Standards and test samples are added to the wells and incubated. A biotinylated detection polyclonal antibody from goat specific for TrkA is then added followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex is added and unbound conjugates are washed away with PBS or TBS buffer. TMB is then used to visualize the HRP enzymatic reaction. TMB is catalyzed by HRP to produce a blue color product that changes into yellow after adding acidic stop solution. The density of yellow coloration is directly proportional to the rat TrkA amount of sample captured in plate.

試験プラットフォーム

製品の特長

保存方法

Store at -20°C. Please refer to protocols.

内容	ラベル	1 x 96 tests
ABC Diluent Buffer	Blue Cap	1 x 12ml
Antibody Diluent Buffer	Green Cap	1 x 12ml

内容	ラベル	1 x 96 tests
Anti-Rat TrkA antibody Microplate (12 x 8 wells)		1 unit
Avidin-Biotin-Peroxidase Complex (ABC)		1 x 100µl
Biotinylated anti-rat TrkA antibody		1 x 100µl
Lyophilized recombinant rat TrkA standard		2 x 10ng
Plate Seal		4 units
Sample Diluent Buffer	Green Cap	1 x 30ml
TMB Color Developing Agent	Amber Bottle	1 x 10ml
TMB Stop Solution	Yellow Cap	1 x 10ml
Wash Buffer (25X)		1 x 20ml

機能	<p>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. Antagonizes the anti-proliferative NGF-NTRK1 signaling that promotes neuronal precursors differentiation. Isoform TrkA-III promotes angiogenesis and has oncogenic activity when overexpressed.</p>
組織特異性	<p>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.</p>
関連疾患	<p>Congenital insensitivity to pain with anhidrosis Chromosomal aberrations involving NTRK1 are found in papillary thyroid carcinomas (PTCs) (PubMed:2869410, PubMed:7565764, PubMed:1532241). Translocation t(1;3)(q21;q11) with TFG generates the TRKT3 (TRK-T3) transcript by fusing TFG to the 3'-end of NTRK1 (PubMed:7565764). A rearrangement with TPM3 generates the TRK transcript by fusing TPM3 to the 3'-end of NTRK1 (PubMed:2869410). An intrachromosomal rearrangement that links the protein kinase domain of NTRK1 to the 5'-end of the TPR gene forms the fusion protein TRK-T1. TRK-T1 is a 55 kDa protein reacting with antibodies against the C-terminus of the NTRK1 protein (PubMed:1532241).</p>
配列類似性	<p>Belongs to the protein kinase superfamily. Tyr protein kinase family. Insulin receptor subfamily. Contains 2 Ig-like C2-type (immunoglobulin-like) domains.</p>

Contains 2 LRR (leucine-rich) repeats.
Contains 1 LRRCT domain.
Contains 1 protein kinase domain.

ドメイン

The transmembrane domain mediates interaction with KIDINS220.
The extracellular domain mediates interaction with NGFR.

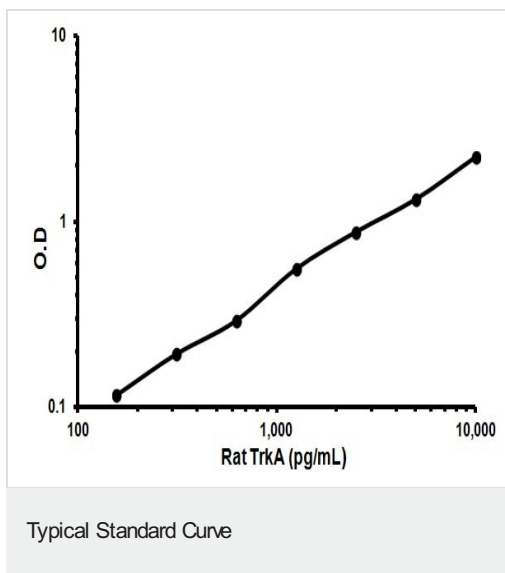
翻訳後修飾

Ligand-mediated autophosphorylation. Interaction with SQSTM1 is phosphotyrosine-dependent. Autophosphorylation at Tyr-496 mediates interaction and phosphorylation of SHC1. N-glycosylated (Probable). Isoform TrkA-I is N-glycosylated. Ubiquitinated. Undergoes polyubiquitination upon activation; regulated by NGFR. Ubiquitination regulates the internalization of the receptor.

細胞内局在

Cell membrane. Early endosome membrane. Late endosome membrane. Internalized to endosomes upon binding of NGF or NTF3 and further transported to the cell body via a retrograde axonal transport. Localized at cell membrane and early endosomes before nerve growth factor (NGF) stimulation. Recruited to late endosomes after NGF stimulation. Colocalized with RAPGEF2 at late endosomes (By similarity).

画像



Representative standard curve using ab119609

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