

ARG81759 Rat TrkA ELISA Kit

Package: 96 wells
Store at: 4°C

Component

Cat. No.	Component Name	Package	Temp
ARG81759-001	Antibody-coated microplate	8 X 12 strips	4°C. Unused strips should be sealed tightly in the air-tight pouch.
ARG81759-002	Standard	2 X 10 ng/vial	4°C
ARG81759-003	Standard/Sample diluent	30 ml (Ready to use)	4°C
ARG81759-004	Antibody conjugate concentrate (100X)	1 vial (100 µl)	4°C
ARG81759-005	Antibody diluent buffer	12 ml (Ready to use)	4°C
ARG81759-006	HRP-Streptavidin concentrate (100X)	1 vial (100 µl)	4°C
ARG81759-007	HRP-Streptavidin diluent buffer	12 ml (Ready to use)	4°C
ARG81759-008	25X Wash buffer	20 ml	4°C
ARG81759-009	TMB substrate	10 ml (Ready to use)	4°C (Protect from light)
ARG81759-010	STOP solution	10 ml (Ready to use)	4°C
ARG81759-011	Plate sealer	4 strips	Room temperature

Summary

Product Description	ARG81759 Rat TrkA ELISA Kit is an Enzyme Immunoassay kit for the quantification of Rat TrkA in cell culture supernatants.
Tested Reactivity	Rat
Tested Application	ELISA
Specificity	There is no detectable cross-reactivity with other relevant proteins.
Target Name	TrkA
Conjugation	HRP
Conjugation Note	Substrate: TMB and read at 450 nm.
Sensitivity	15.6 pg/ml
Sample Type	Cell culture supernatants.
Standard Range	31.2 - 2000 pg/ml
Sample Volume	100 µl

Precision	Intra-Assay CV: 6.0%; Inter-Assay CV: 7.2%
Alternate Names	TRK; High affinity nerve growth factor receptor; Neurotrophic tyrosine kinase receptor type 1; TRKA; Tyrosine kinase receptor A; p140-TrkA; Trk-A; Tropomyosin-related kinase A; TRK1-transforming tyrosine kinase protein; TRK1; gp140trk; MTC; Tyrosine kinase receptor; EC 2.7.10.1

Application Instructions

Assay Time	~ 5 hours
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Properties

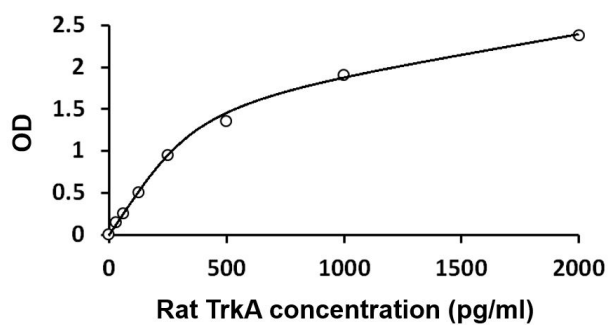
Form	96 well
Storage instruction	Store the kit at 2-8°C. Keep microplate wells sealed in a dry bag with desiccants. Do not expose test reagents to heat, sun or strong light during storage and usage. Please refer to the product user manual for detail temperatures of the components.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	NTRK1
Gene Full Name	neurotrophic tyrosine kinase, receptor, type 1
Background	<p>This gene encodes a member of the neurotrophic tyrosine kinase receptor (NTRK) family. This kinase is a membrane-bound receptor that, upon neurotrophin binding, phosphorylates itself and members of the MAPK pathway. The presence of this kinase leads to cell differentiation and may play a role in specifying sensory neuron subtypes. Mutations in this gene have been associated with congenital insensitivity to pain, anhidrosis, self-mutilating behavior, mental retardation and cancer. Alternate transcriptional splice variants of this gene have been found, but only three have been characterized to date. [provided by RefSeq, Jul 2008]</p>
Function	<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.</p> <p>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. [UniProt]</p>
Highlight	<p>Related products: Trk antibodies; Trk ELISA Kits; New ELISA data calculation tool: Simplify the ELISA analysis by GainData</p>
PTM	<p>Ligand-mediated autophosphorylation (PubMed:2927393, PubMed:1281417, PubMed:15488758, PubMed:7510697, PubMed:8155326, PubMed:8325889, PubMed:27676246). Interaction with SQSTM1 is phosphotyrosine-dependent. Autophosphorylation at Tyr-496 mediates interaction and phosphorylation of SHC1 (PubMed:15488758, PubMed:7510697, PubMed:8155326, PubMed:8325889).</p> <p>N-glycosylated (PubMed:2927393). Isoform TrkA-I and isoform TrkA-II are N-glycosylated.</p>

Ubiquitinated. Undergoes polyubiquitination upon activation; regulated by NGFR. Ubiquitination regulates the internalization of the receptor. [UniProt]

Images



ARG81759 Rat TrkA ELISA Kit standard curve image

ARG81759 Rat TrkA ELISA Kit results of a typical standard run with optical density reading at 450 nm.