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Datasheet for 600-401-993

TrkCT1 Antibody

Overview

Description:	Anti-TrkCT1 (RABBIT) Antibody - 600-401-993
Item No.:	600-401-993
Size:	100 µg
Applications:	ELISA, IP, WB
Reactivity:	Human, Mouse
Host Species:	Rabbit

Product Details

Background:	This antibody is designed, produced, and validated as part of a collaboration between Rockland and the National Cancer Institute (NCI) and is suitable for Cancer, Immunology and Nuclear Signaling research. TrkCT1, also named neurotrophic tyrosine kinase receptor type 3 (Ntrk3) non-catalytic isoform 2, is a non-catalytic isoform of TrkC, the high affinity receptor for Neurotrophin-3 (NT-3). This isoform lacks the kinase domain that is responsible for signaling by the full-length isoform. TrkCT1 is the product of an alternative splicing of Ntrk3 that leaves the extracellular and transmembrane domains intact but includes a shorter intracellular domain encoded by exons 13b and 14b. Recent studies indicate that the short cytoplasmic tail binds the scaffold protein Tamalin in a ligand-dependent manner and further activates the Arf6–Rac1 signaling pathway. Isoform 3 transcripts are readily detected early during embryogenesis and are expressed predominantly in adult brain and gonads.
Synonyms:	rabbit anti-TrkCT1 antibody, rabbit anti-Ntrk3 antibody, TrkCT-1, NT-3 growth factor receptor, GP145-TrkC, Trk-C, ETV6 NTRK3 fusion antibody, GP145 TrkC antibody, GP145TrkC antibody, Neurotrophic tyrosine kinase receptor type 3 antibody, TrkC tyrosine kinase, TrkC NC2
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	Ntrk3
Reactivity:	Human, Mouse

Immunogen Type:	Conjugated Peptide
Immunogen:	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids near the carboxyl terminus of mouse TrkCT1 protein.
Purity/Specificity:	This affinity purified antibody is directed against mouse TrkCT1 protein. The product was affinity purified from monospecific antiserum by immunoaffinity chromatography. A BLAST analysis was used to suggest cross-reactivity with TrkCT1 protein from human, mouse and rat based on 100% homology with the immunizing sequence. Reactivity against homologues from other sources is not known.
Relevant Links:	• NCBI - 33413429 • UniProtKB - Q6VNS1 • GeneID - 18213

Application Details

Tested Applications:	ELISA, IP, WB
Application Note:	This affinity purified antibody has been tested for use in ELISA, IP, and western blotting. Specific conditions for reactivity should be optimized by the end user. While the predicted molecular weight for TrkCT1 is approximately 68 kDa, the protein has been reported to migrate at about 95 kDa on western blots. The molecular weight noted for TrkCT1 depends somewhat upon the cell lysate or extract used for western blotting, and this variation may be due to post-translational modifications of the protein.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:5,000 - 1:20,000
IP:	1 µg
WB:	1:1,000 - 1:10,000

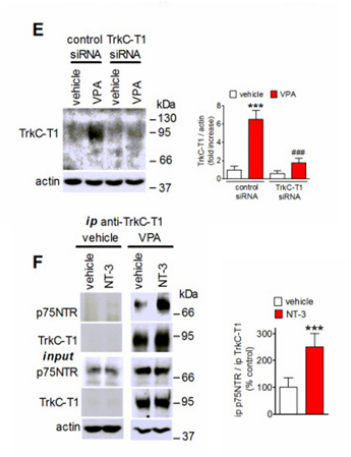
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

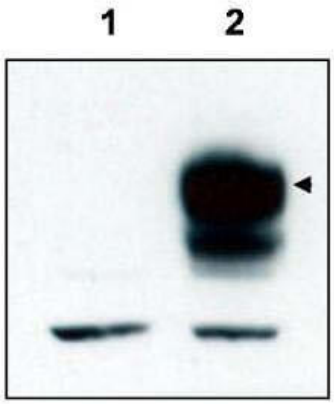
Images



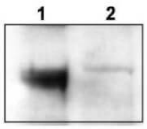
Immunoprecipitation
(E) Cells were transfected with either control siRNA, TrkC-T1 siRNA, or p75NTR siRNA and then treated for 24 h with either vehicle or 1 mM VPA and cell lysates were analyzed for TrkC-T1 expression by using a TrkC-T1 specific antibody (p/n 600-401-993). Values are the mean ± SD of four independent experiments. *** $p < 0.001$ vs. control (control siRNA + vehicle); ### $p < 0.001$ vs. VPA in control siRNA-treated cells by ANOVA followed by Tukey's test. (F) SH-SY5Y cells pretreated for 24 h with either vehicle or 1 mM VPA were then exposed for 1 h to NT-3 (1.0 nM) in serum-free medium. Cell extracts were then subjected to immunoprecipitation (ip) with anti-TrkC-T1 antibody. Cell extracts (input) and immunoprecipitates were analyzed for p75NTR and TrkC-T1 levels. Values refer to the densitometric ratios of p75NTR over TrkC-T1 in immunoprecipitates of VPA-treated cells and are the mean ± SD of four independent experiments. *** $p < 0.001$ vs. control (VPA + vehicle) by Student's t test. Fig 8. PMID: 34360553



Western Blot
Mouse cortex lysate was immunoprecipitated with anti-TrkCT1 antibody and further blotted with affinity purified anti-TrkCT1. Lane 1 is wild-type cortex lysate, Lane 2 is Tamalin knock-out cortex lysate, and Lane 3 is TrkCT1 knock-out cortex lysate. The membrane was probed with the primary antibody at a 1:6,000 dilution. Personal Communication, V. Coppola, CCR-NCI, Frederick, MD.



Western Blot
Western blot using Rockland's affinity purified anti-TrkCT1 to detect over-expressed TrkCT1 in HEK293 cells (Lane 2, arrowhead). Lane 1 is a non-transfected control. Cell extracts were resolved by electrophoresis and transferred to nitrocellulose. The membrane was probed with the primary antibody at a 1:3,000 dilution. Personal Communication, V. Coppola, CCR-NCI, Frederick, MD.



Western Blot
Western blot using Rockland's affinity purified anti-TrkCT1 to detect endogenous TrkCT1 in mouse cortex lysate (Lane 1). Lane 2 is TrkCT1 knock-out cortex lysate. Cell extracts were resolved by electrophoresis and transferred to nitrocellulose. The membrane was probed with the primary antibody at a 1:6,000 dilution. Personal Communication, V. Coppola, CCRNCI, Frederick, MD.

References

- Dedoni S et al. The neurotrophin receptor trkc as a novel molecular target of the antineuroblastoma action of valproic acid. *Int J Mol Sci.* (2021)

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