

PRODUCT INFORMATION

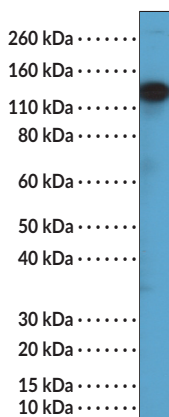
pan-Trk (C-Term) Rabbit Monoclonal Antibody (Clone RM423)

Item No. 35316

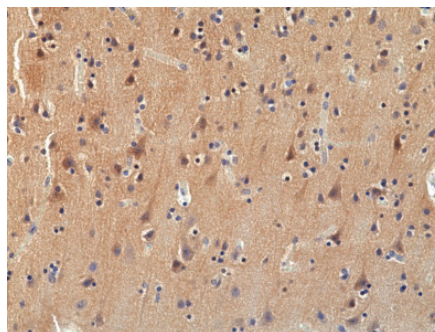
Overview and Properties

Contents:	This vial contains 100 µl protein A-affinity purified monoclonal antibody.
Synonyms:	Neurotrophic Receptor Tyrosine Kinase, Tropomyosin-related Kinase
Immunogen:	Peptide from the C-terminal region of human Trk
Cross Reactivity:	(+) Trk
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM423
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:100-1:400 for IHC and 1:1,000-1:4,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



WB of mouse brain tissue lysates using pan-Trk (C-Term) Rabbit Monoclonal Antibody (Clone RM423) at a dilution of 1:2,000.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human brain tissue using pan-Trk (C-Term) Rabbit Monoclonal Antibody (Clone RM423) at a dilution of 1:100.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 01/19/2024

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

PRODUCT INFORMATION



Description

Tropomyosin-related kinase A (TrkA), TrkB, and TrkC are transmembrane receptors that are encoded by *NTRK1*, *NTRK2*, and *NTRK3*, respectively, in humans with roles in neuronal cell differentiation and survival, synaptic formation and plasticity, memory formation and retention, proprioception, and nociception.^{1,2} They are composed of an extracellular domain containing two cysteine-rich clusters, three Trk-specific leucine-rich repeats, and two immunoglobulin-like domains, a transmembrane region, and an intracellular tyrosine kinase domain.¹ Trks are expressed in neuronal tissue and have essential roles in embryonic development and nervous system function. Binding of neurotrophins to Trks induces receptor dimerization and autophosphorylation. This induces activation of the intracellular kinase domain, enabling docking of cytoplasmic adaptor proteins and enzymes to facilitate downstream intracellular signaling events via the ERK/MAPK, PI3K, and PLC γ pathways. Loss-of-function mutations in *NTRK1* are associated with autonomic and sensory neuronal disorders, such as congenital insensitivity to pain with anhidrosis, while loss-of-function mutations in *NTRK2* are associated with loss of appetite control, obesity, and defects in learning and memory. *NTRK3-ETV6* gene fusions are pathognomonic in infantile fibrosarcoma and congenital mesoblastic nephroma.^{1,3} Cayman's pan-Trk (C-Term) Rabbit Monoclonal Antibody (Clone RM423) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

References

1. Khotskaya, Y.B., Holla, V.R., Farago, A.F., *et al.* Targeting TRK family proteins in cancer. *Pharmacol. Ther.* **173**, 58-66 (2017).
2. Amatu, A., Sartore-Bianchi, A., Bencardino, K., *et al.* Tropomyosin receptor kinase (TRK) biology and the role of *NTRK* gene fusions in cancer. *Ann. Oncol.* **30**(Suppl_8), viii5-viii15 (2019).
3. Drilon, A. TRK inhibitors in TRK fusion-positive cancers. *Ann. Oncol.* **30** (Suppl 8), viii23-viii30 (2019).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM