

TRK-T3 (K-14): sc-47522

BACKGROUND

Oncogenic rearrangements of the NTRK1 gene, which encodes the Trk A protein, are frequently detected in thyroid carcinomas. Such rearrangements fuse the NTRK1 tyrosine kinase domain to 5'-end sequences of different genes. TRK-T3 contains 1,412 nucleotides of NTRK1 preceded by 598 nucleotides belonging to TFG (TRK-fused gene), a ubiquitously expressed gene located on chromosome 3. The TRK-T3 protein within the TFG region contains a coiled-coil motif that gives the oncoprotein the capability to form complexes. The cytoplasmic TRK-T3 protein binds to and phosphorylates the Shc and SNT1/FRS2 adaptor proteins, both of which are involved in coupling the receptor tyrosine kinase to the mitogen-activated protein kinase pathway by recruiting Grb2/SOS. SHP-1 also interacts with and down-regulates TRK-T3.

REFERENCES

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4. Roccato, E., Pagliardini, S., Cleris, L., Canevari, S., Formelli, F., Pierotti, M.A. and Greco, A. 2003. Role of TFG sequences outside the coiled-coil domain in TRK-T3 oncogenic activation. *Oncogene* 22: 807-818.
5. Edel, M.J., Shvarts, A., Medema, J.P. and Bernards, R. 2004. An *in vivo* functional genetic screen reveals a role for the TRK-T3 oncogene in tumor progression. *Oncogene* 23: 4959-4965.
6. Roccato, E., Miranda, C., Raho, G., Pagliardini, S., Pierotti, M.A. and Greco, A. 2005. Analysis of SHP-1-mediated down-regulation of the TRK-T3 oncoprotein identifies TRK-fused gene (TFG) as a novel SHP-1-interacting protein. *J. Biol. Chem.* 280: 3382-3389.

CHROMOSOMAL LOCATION

Genetic locus: TFG (human) mapping to 3q12.2; Tfg (mouse) mapping to 16 C1.1.

SOURCE

TRK-T3 (K-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TRK-T3 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-47522 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TRK-T3 (K-14) is recommended for detection of TRK-T3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TRK-T3 (K-14) is also recommended for detection of TRK-T3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for TRK-T3 siRNA (h): sc-61720, TRK-T3 siRNA (m): sc-61721, TRK-T3 shRNA Plasmid (h): sc-61720-SH, TRK-T3 shRNA Plasmid (m): sc-61721-SH, TRK-T3 shRNA (h) Lentiviral Particles: sc-61720-V and TRK-T3 shRNA (m) Lentiviral Particles: sc-61721-V.

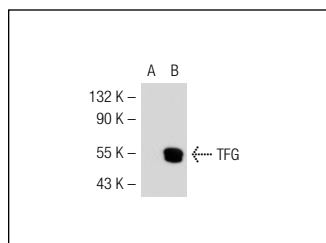
Molecular Weight of TRK-T3: 68 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or TFG (m): 293T Lysate: sc-123998.

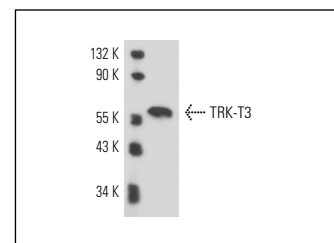
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



TRK-T3 (K-14): sc-47522. Western blot analysis of TFG expression in non-transfected: sc-117752 (A) and mouse TFG transfected: sc-123998 (B) 293T whole cell lysates.



TRK-T3 (K-14): sc-47522. Western blot analysis of TRK-T3 expression in HeLa whole cell lysate.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.