



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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## TFG (m): 293T Lysate: sc-123998

### 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 downregulates TRK-T3.

### REFERENCES

1. Greco, A., Mariani, C., Miranda, C., Lupas, A., Pagliardini, S., Pomati, M. and Pierotti, M.A. 1995. The DNA rearrangement that generates the TRK-T3 oncogene involves a novel gene on chromosome 3 whose product has a potential coiled-coil domain. *Mol. Cell. Biol.* 15: 6118-6127.
2. Roccatto, E., Miranda, C., Ranzi, V., Gishizki, M., Pierotti, M.A. and Greco, A. 2002. Biological activity of the thyroid TRK-T3 oncogene requires signalling through Shc. *Br. J. Cancer* 87: 645-653.
3. Ranzi, V., Meakin, S.O., Miranda, C., Mondellini, P., Pierotti, M.A. and Greco, A. 2003. The signaling adapters fibroblast grow are activated by the thyroid TRK oncoproteins. *Endocrinology* 144: 922-928.
4. Roccatto, 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. Roccatto, 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 (mouse) mapping to 16 C1.1.

### PRODUCT

TFG (m): 293T Lysate represents a lysate of mouse TFG transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

### APPLICATIONS

TFG (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive TFG antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

### STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.