



Txk (H-85): sc-50339

BACKGROUND

The Tec family of non-receptor tyrosine kinases is composed of six proteins designated Tec, Emt (also known as Itk or Tsk), Btk (previously known as Atk, BPK or Emb), Bmx, Txk (also known as Rlk) and Dsrc28C. All members of the family contain SH3 and SH2 domains and, with the exception of Txk and Dsrc28C, also contain a pleckstrin homology (PH) and a Tec homology (TH) domain in their amino termini. Four alternatively spliced forms of Tec are found to be expressed broadly in cells of hematopoietic lineage and hepatocytes. The Emt gene product associates with CD28 and becomes activated subsequent to CD28 ligation. Btk is necessary for proper B-cell development and mutations in the gene encoding Btk have been associated with families suffering from X-linked agammaglobulinemia, also referred to as Bruton's disease. The Bmx protein shares a high degree of homology with Btk and seems to be expressed at highest levels in the heart. Txk expression is T-cell-specific, while expression of the *Drosophila* Tec homolog, Dsrc28C, is developmentally regulated.

REFERENCES

1. Yamada, N., et al. 1993. Structure and expression of novel protein tyrosine kinases, Emb and Emt, in hematopoietic cells. *Biochem. Biophys. Res. Commun.* 192: 231-240.
2. Thomas, J.D., et al. 1993. Co-localization of X-linked agammaglobulinemia and X-linked immunodeficiency genes. *Science* 261: 355-358.
3. Tamagnone, L., et al. 1994. Bmx, a novel nonreceptor tyrosine kinase gene of the Btk/Itk/Tec/Txk family located in chromosome Xp22.2. *Oncogene* 9: 3683-3688.
4. Haire, R.N., et al. 1994. Txk, a novel human tyrosine kinase expressed in T cells shares sequence identity with Tec family kinases and maps to 4p12. *Hum. Mol. Genet.* 3: 897-901.
5. August, A., et al. 1994. CD28 is associated with and induces the immediate tyrosine phosphorylation and activation of the Tec family kinase Itk/Emt in the human Jurkat leukemic T-cell line. *Proc. Natl. Acad. Sci. USA* 91: 9347-9351.
6. Hu, Q., et al. 1995. Identification of Rlk, a novel protein tyrosine kinase with predominant expression in the T-cell lineage. *J. Biol. Chem.* 270: 1928-1934.

CHROMOSOMAL LOCATION

Genetic locus: TXK (human) mapping to 4p12; Txk (mouse) mapping to 5 C3.2.

SOURCE

Txk (H-85) is a rabbit polyclonal antibody raised against amino acids 19-103 mapping near the N-terminus of Txk 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.

RESEARCH USE

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

APPLICATIONS

Txk (H-85) is recommended for detection of Txk of 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)..

Suitable for use as control antibody for Txk siRNA (h): sc-38943.

Molecular Weight of Txk: 62 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.