

Tec (G-5): sc-365533

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. Colocalization of X-linked agammaglobulinemia and X-linked immunodeficiency genes. *Science* 261: 355-358.
3. 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.
4. 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.

CHROMOSOMAL LOCATION

Genetic locus: TEC (human) mapping to 4p12.

SOURCE

Tec (G-5) is a mouse monoclonal antibody raised against amino acids 111-200 mapping near the N-terminus of Tec of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Tec (G-5) is available conjugated to agarose (sc-365533 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365533 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365533 PE), fluorescein (sc-365533 FITC), Alexa Fluor® 488 (sc-365533 AF488), Alexa Fluor® 546 (sc-365533 AF546), Alexa Fluor® 594 (sc-365533 AF594) or Alexa Fluor® 647 (sc-365533 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365533 AF680) or Alexa Fluor® 790 (sc-365533 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Tec (G-5) is recommended for detection of Tec of human origin by Western Blotting (starting dilution 1:100, 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 Tec siRNA (h): sc-36633, Tec shRNA Plasmid (h): sc-36633-SH and Tec shRNA (h) Lentiviral Particles: sc-36633-V.

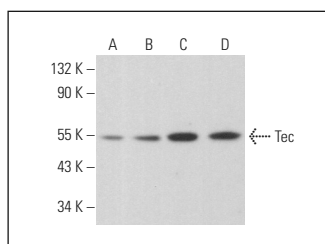
Molecular Weight of Tec: 59 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, K-562 whole cell lysate: sc-2203 or Ramos cell lysate: sc-2216.

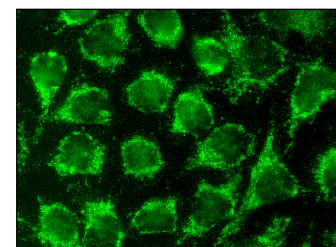
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Tec (G-5): sc-365533. Western blot analysis of Tec expression in Jurkat (A), Ramos (B), K-562 (C) and HEL 92.1.7 (D) whole cell lysates.



Tec (G-5): sc-365533. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

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.

PROTOCOLS

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