SANTA CRUZ BIOTECHNOLOGY, INC.

Emt (M-109): sc-1697

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

Genetic locus: ITK (human) mapping to 5q33.3; Itk (mouse) mapping to 11 B1.1.

SOURCE

Emt (M-109) is a rabbit polyclonal antibody raised against amino acids 1-109 mapping at the N-terminus of Emt of mouse origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

Emt (M-109) is recommended for detection of Emt 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).

Emt (M-109) is also recommended for detection of Emt in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Emt siRNA (h): sc-35300, Emt siRNA (m): sc-35301, Emt shRNA Plasmid (h): sc-35300-SH, Emt shRNA Plasmid (m): sc-35301-SH, Emt shRNA (h) Lentiviral Particles: sc-35300-V and Emt shRNA (m) Lentiviral Particles: sc-35301-V.

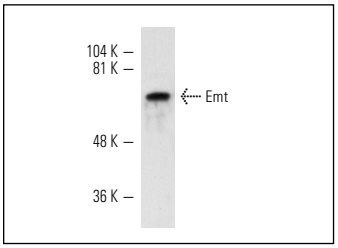
Molecular Weight of Emt: 72 kDa.

Positive Controls: HuT 78 whole cell lysate: sc-2208, human PBL whole cell lysate or Jurkat whole cell lysate: sc-2204.

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.

DATA



Emt (M-109): sc-1697. Western blot analysis of Emt expression in human PBL whole cell lysate.

SELECT PRODUCT CITATIONS

1. Woods, M.L., et al. 2001. A novel function for the Tec family tyrosine kinase Itk in activation of β 1 integrins by the T-cell receptor. EMBO J. 20: 1232-1244.
2. Tsai, C.H., et al. 2013. High glucose induces vascular endothelial growth factor production in human synovial fibroblasts through reactive oxygen species generation. Biochim. Biophys. Acta 1830: 2649-2658.
3. Tsou, H.K., et al. 2013. HGF and c-Met interaction promotes migration in human chondrosarcoma cells. PLoS ONE 8: e53974.
4. Yu, H.S., et al. 2013. Involvement of intercellular adhesion molecule-1 up-regulation in bradykinin promotes cell motility in human prostate cancers. Int. J. Mol. Sci. 14: 13329-13345.

RESEARCH USE

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

PROTOCOLS

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