

# Bmx (D-6): sc-271706

## 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. 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.

## CHROMOSOMAL LOCATION

Genetic locus: BMX (human) mapping to Xp22.2; Bmx (mouse) mapping to X F5.

## SOURCE

Bmx (D-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 643-671 at the C-terminus of Bmx of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>3</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-271706 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

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

## APPLICATIONS

Bmx (D-6) is recommended for detection of Bmx of mouse, rat and 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).

Bmx (D-6) is also recommended for detection of Bmx in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Bmx siRNA (h): sc-38941, Bmx siRNA (m): sc-38942, Bmx shRNA Plasmid (h): sc-38941-SH, Bmx shRNA Plasmid (m): sc-38942-SH, Bmx shRNA (h) Lentiviral Particles: sc-38941-V and Bmx shRNA (m) Lentiviral Particles: sc-38942-V.

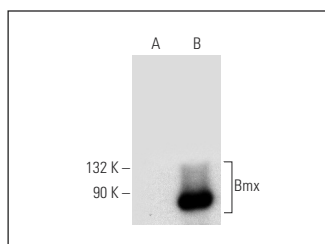
Molecular Weight of Bmx: 85 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or Bmx (h): 293T Lysate: sc-113287.

## 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



Bmx (D-6): sc-271706. Western blot analysis of Bmx expression in non-transfected: sc-117752 (A) and human Bmx transfected: sc-113287 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Yang, F., et al. 2021. FAS signaling in adipocytes promotes low-grade inflammation and lung metastasis of colorectal cancer through interaction with Bmx. *Cancer Lett.* 522: 93-104.

## RESEARCH USE

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