

# Recombinant Mouse BMX Protein

**For Research Use Only**

## 1. Basic Product Information

Catalog No.: REP51523

Size: 10ug, 100ug

Protein Name: Cytoplasmic tyrosine-protein kinase BMX (EC 2.7.10.2) (Bone marrow tyrosine kinase gene in chromosome X protein homolog)

Synonym: Bmx

UniProt ID: P97504

UniProt Link: [www.uniprot.org/uniprotkb/P97504/entry](http://www.uniprot.org/uniprotkb/P97504/entry)

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 651 AA

Molecular Weight: 75 KD

Protein Tag: C-terminal His6

## 2. Amino Acid Sequence

MESKSILEELLKKSQQKKKMSPNNYKERLFVLTKTSLSYEYDKMKRGSRKGSIEIKKIRCVEKVNL  
EEQTPVERQYPFQIVYKDGLLYVYASNEESRCQWLKALQKEIRGNPHLLIKYHSGFFVDGKFLCCQQ  
SCKAAPGCTLWEAYADLHIAISDEKHRAPTFFPERLLKIPRAVPVLKMDASSSGAILPQYDSYSKKSCG  
SQPTSNIRYIPREDCPDWWQVRKLKSEEDIACSNQLERNIASHSTSKMSWGFPESSSSEEEENLHA  
YDWFAGNISRSQSEQLLRQKGKEGAFMVRNSSQMGMVTVSLFSKAVNDKKGTVKHYHVHTNAENK  
LYLAENYCFDSIPKLIHYHQHNSAGMITRLRHPVSTKANKVPVSVALGSGIWELKREEITLLKELGNGQ  
FGVVQLGQWKGYDVAVKMIKEGAMSEDEFFQEAQTMMKLSPKLVKFYGVCSKKYPIYIVTEYITN  
GCLLNYLKSHGKGLESCQLLEMCYDVCEGMAFLESHQFIHRDLAARNCLVDSDSL SVKVSDFGMTRY  
VLDDQYVSSVGTKFPVKWSAPEVFHYFKYSSKSDVWAFILMWEVFSLGKQPYDLYDNSEVVVKVS  
QGHRLYRPQLASDTIYQIMYSCWHELPEKRPTFQQLLSAIEPLREQDKP

## 3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

## 4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

## 5. Product Description

This product is recombinant Cytoplasmic tyrosine-protein kinase BMX (EC 2.7.10.2) (Bone marrow tyrosine kinase gene in chromosome X protein homolog) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

**Protein Function:** Non-receptor tyrosine kinase that plays central but diverse modulatory roles in various signaling processes involved in the regulation of actin reorganization, cell migration, cell proliferation and survival, cell adhesion, and apoptosis. Participates in signal transduction stimulated by growth factor receptors, cytokine receptors, G protein-coupled receptors, antigen receptors and integrins. Induces tyrosine phosphorylation of BCAR1 in response to integrin regulation. Activation of BMX by integrins is mediated by PTK2/FAK1, a key mediator of integrin signaling events leading to the regulation of actin cytoskeleton and cell motility. Plays a critical role in TNF-induced angiogenesis, and implicated in the signaling of TEK and FLT1 receptors, 2 important receptor families essential for angiogenesis. Required for the phosphorylation and activation of STAT3, a transcription factor involved in cell differentiation. Also involved in interleukin-6 (IL6) induced differentiation. Also plays a role in programming adaptive cytoprotection against extracellular stress in different cell systems, salivary epithelial cells, brain endothelial cells, and dermal fibroblasts. May be involved in regulation of endocytosis through its interaction with an endosomal protein RUFY1. May also play a role in the growth and differentiation of hematopoietic cells; as well as in signal transduction in endocardial and arterial endothelial cells.

**Subcellular Localization:** Cytoplasm . Note=Localizes to the edges of spreading cells when complexed with BCAR1.

## 6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.