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BMX Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1396a

Product Information

Application	WB, E
Primary Accession	P51813
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	1C6
Isotype	IgG1
Calculated MW	78011
Description	BMX (bone marrow X kinase) is a cytoplasmic tyrosine kinase identified by reverse transcription of mRNA isolated from human bone marrow and mapped to the chromosomal band Xp22.2. The full length protein is 675 amino acids with a tyrosine kinase domain, an amino terminal pleckstrin domain, as well as an SH3 and SH2 domain. Direct comparison of BMX's primary sequence with other kinases showed that this is highly related to the family of BTK/ITK/TEC. BMX kinase is expressed in fetal and adult tissues, with the highest expression in heart, testis, small intestine and colon. It is undetectable in spleen, brain, kidney, and pancreas. Further analysis of mRNA expression showed that BMX is expressed in hematopoietic tissues and neutrophilic granulocytes, and in patients with acute and myeloid leukemia. The levels of BMX mRNA were substantially lower in patients with acute and chronic lymphoid leukemias, thus suggesting that BMX may be important during myelopoiesis.CST:It is expressed in a variety of hematopoietic, epithelial and endothelial cells.
Immunogen	Purified recombinant fragment of human BMX expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	660
Other Names	Cytoplasmic tyrosine-protein kinase BMX, 2.7.10.2, Bone marrow tyrosine kinase gene in chromosome X protein, Epithelial and endothelial tyrosine kinase, ETK, NTK38, BMX
Dilution	WB~~1/500 - 1/2000 E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions	BMX Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	BMX
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.
Cellular Location	Cytoplasm. Note=Localizes to the edges of spreading cells when complexed with BCAR1
Tissue Location	Highly expressed in cells with great migratory potential, including endothelial cells and metastatic carcinoma cell lines

References

1. Oncogene. 2004 Mar 11;23(10):1838-44. 2. Nat Cell Biol. 2005 Aug;7(8):797-807. 3. Blood. 2008 Feb 15;111(4):1781-8.

Images

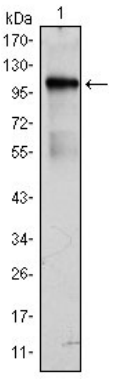

Figure 1: Western blot analysis using BMX mAb against BMX(AA: 138-276)-hIgGFc transfected HEK293 cell lysate.