SANTA CRUZ BIOTECHNOLOGY, INC.

PBEF (H-300): sc-67020

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Pre-B cell-enhancing factor (PBEF), also designated nicotinamide phosphoribosyltransferase (Nampt) or visfatin, belongs to the NAPRTase family of proteins. PBEF may be involved in enhancing the effect of IL-7 and SCF on the formation of early B-lineage precursor colonies. It is involved in the catalysis of nicotinamide with 5-phosphoribosyl-1-pyrophosphate, yielding nicotinamide mononucleotide which is important in NAD biosynthesis. This is a rate limiting step in the NAD biosynthesis pathway. Highly enriched in the visceral fat of both human and mice, PBEF expression levels in plasma increase during the development of obesity. PBEF is a cytoplasmic protein expressed primarily in bone marrow, muscle and liver tissue but can also be detected in placenta, lung, kidney and heart tissue.

REFERENCES

1. Samal, B., et al. 1994. Cloning and characterization of the cDNA encoding a novel human PBEF. Mol. Cell. Biol. 14: 1431-1437.
2. Ognjanovic, S., et al. 2001. Genomic organization of the gene coding for human pre-B cell colony enhancing factor and expression in human fetal membranes. J. Mol. Endocrinol. 26: 107-117.
3. Martin, P.R., et al. 2001. Identification of a plasmid-encoded gene from *Haemophilus ducreyi* which confers NAD independence. J. Bacteriol. 183: 1168-1174.
4. Ognjanovic, S., et al. 2002. Pre-B cell colony-enhancing factor, a novel cytokine of human fetal membranes. Am. J. Obstet. Gynecol. 187: 1051-1058.
5. Jia, S.H., et al. 2004. Pre-B cell colony-enhancing factor inhibits neutrophil apoptosis in experimental inflammation and clinical sepsis. J. Clin. Invest. 113: 1318-1327.

CHROMOSOMAL LOCATION

Genetic locus: NAMPT (human) mapping to 7q22.3; Nampt (mouse) mapping to 12 A3.

SOURCE

PBEF (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of PBEF of human 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.

RESEARCH USE

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

APPLICATIONS

PBEF (H-300) is recommended for detection of Pre-B cell enhancing factor 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

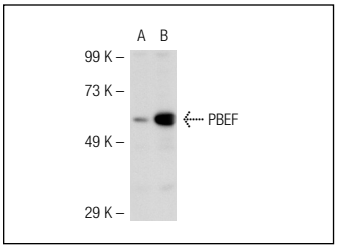
PBEF (H-300) is also recommended for detection of Pre-B cell enhancing factor in additional species, including bovine and porcine.

Suitable for use as control antibody for PBEF siRNA (h): sc-45843, PBEF siRNA (m): sc-45844, PBEF shRNA Plasmid (h): sc-45843-SH, PBEF shRNA Plasmid (m): sc-45844-SH, PBEF shRNA (h) Lentiviral Particles: sc-45843-V and PBEF shRNA (m) Lentiviral Particles: sc-45844-V.

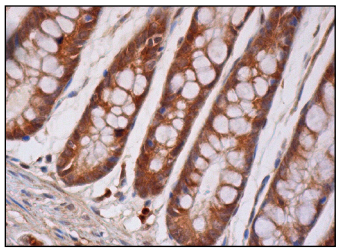
Molecular Weight of PBEF: 52 kDa.

Positive Controls: PBEF (m): 293T Lysate: sc-122402, LADMAC whole cell lysate: sc-364189 or HL-60 whole cell lysate: sc-2209.

DATA



PBEF (H-300): sc-67020. Western blot analysis of PBEF expression in non-transfected: sc-117752 (**A**) and mouse PBEF transfected: sc-122402 (**B**) 293T whole cell lysates.



PBEF (H-300): sc-67020. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Hayashida, S., et al. 2010. Fasting promotes the expression of SIRT1, an NAD^+-dependent protein deacetylase, via activation of PPARα in mice. Mol. Cell. Biochem. 339: 285-292.
2. Laudes, M., et al. 2010. Visfatin/PBEF/Nampt and resistin expressions in circulating blood monocytes are differentially related to obesity and type 2 diabetes in humans. Horm. Metab. Res. 42: 268-273.
3. Nogueira, A.V., et al. 2013. Regulation of visfatin by microbial and biomechanical signals in PDL cells. Clin. Oral Investig. E-published.