SANTA CRUZ BIOTECHNOLOGY, INC.

EMBP (FL-222): sc-33556

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The eosinophil major basic protein (EMBP), also designated MBP, PRG2, proteoglycan 2, BMPG, or bone marrow natural killer cell activator, is a constituent of the crystalline core of the eosinophil granule. High levels of the pro-EMBP are present in placenta and pregnancy serum, where it exists as a complex with several other proteins including pregnancy-associated plasma protein A (PAPPA), angiotensinogen (AGT) and C3dg. EMBP may influence antiparasitic defense mechanisms as a cytotoxin and helminthotoxin, and may play a role in immune hypersensitivity reactions. EMBP stimulates an Src kinase-dependent activation of class I (A) phosphoinositide 3-kinase and, in turn, activation of protein kinase C ζ in neutrophils. EMBP transcription is under regulation by novel combinatorial interactions of GATA-1, PU.1, and C/EBPε isoforms.

REFERENCES

1. Oxvig, C., et al. 1993. Circulating human pregnancy-associated plasma protein-A is disulfide-bridged to the proform of eosinophil major basic protein. J. Biol. Chem. 268: 12243-12246.
2. Popken-Harris, P., et al. 1995. Expression, purification, and characterization of the recombinant proform of eosinophil granule major basic protein. J. Immunol. 155: 1472-1480.
3. Larson, K.A., et al. 1995. The identification and cloning of a murine major basic protein gene expressed in eosinophils. J. Immunol. 155: 3002-3012.
4. Li, M.S., et al. 1995. Human eosinophil major basic protein, a mediator of allergic inflammation, is expressed by alternative splicing from two promoters. Biochem. J. 305: 921-927.
5. Mujtaba, M.G., et al. 1997. CD4 T suppressor cells mediate interferon τ protection against experimental allergic encephalomyelitis. J. Neuroimmunol. 75: 35-42.
6. Mukai, H.Y., et al. 1997. Elevated serum levels of eosinophil major basic protein in patients with myeloproliferative disorders without eosinophilia. Int. J. Hematol. 66: 197-202.
7. Yamaguchi, Y. et al. 1999. C/EBPβ and GATA-1 synergistically regulate activity of the eosinophil granule major basic protein promoter: implication for C/EBPβ activity in eosinophil gene expression. Blood 94: 1429-1439.
8. Overgaard, M.T., et al. 2000. Expression of recombinant human pregnancy-associated plasma protein-A and identification of the proform of eosinophil major basic protein as its physiological inhibitor. J. Biol. Chem. 275: 31128-31133.

CHROMOSOMAL LOCATION

Genetic locus: PRG2/PRG3 (human) mapping to 11q12.1.

SOURCE

EMBP (FL-222) is a rabbit polyclonal antibody raised against amino acids 1-222 representing full length EMBP 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.

APPLICATIONS

EMBP (FL-222) is recommended for detection of EMBP, and to a lesser extent, MBPH of 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).

Molecular Weight of EMBP precursor: 25 kDa.

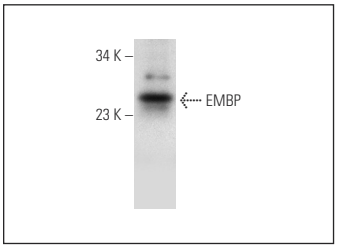
Molecular Weight of mature EMBP: 14 kDa.

Positive Controls: human placenta extract: sc-363772 or MEG-01 cell lysate: sc-2283.

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



EMBP (FL-222): sc-33556. Western blot analysis of EMBP expression in human placenta tissue extract.

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.