

# p22HBP (B-3): sc-398612

## BACKGROUND

p22HBP, also known as HEBP1 (heme binding protein 1), HBP or HEBP, is a 189 amino acid intracellular tetrapyrrole-binding protein that assists in prevention of cellular toxicity by removing free porphyrinogens from the cell. Existing as a monomer, p22HBP localizes to cytoplasm and contains a 21 amino acid chemoattractant within its N-terminus that functions as a natural ligand for FPR3. p22HBP is a member of the HEBP family and binds N-methylprotoporphyrin and metalloporphyrins with similar affinity to porphyrinogens. The gene encoding p22HBP maps to human chromosome 12, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome. Chromosome 12 is associated with a variety of diseases and afflictions, including hypochondrogenesis, achondrogenesis, Kniest dysplasia, Noonan syndrome and trisomy 12p, which causes facial developmental defects and seizure disorders.

## REFERENCES

- Zylka, M.J. and Reppert, S.M. 1999. Discovery of a putative heme-binding protein family (SOUL/HBP) by two-tissue suppression subtractive hybridization and database searches. *Brain Res. Mol. Brain Res.* 74: 175-181.
- Jacob Blackmon, B., et al. 2002. Characterization of a human and mouse tetrapyrrole-binding protein. *Arch. Biochem. Biophys.* 407: 196-201.
- Dias, J.S., et al. 2005. 1H, 15N and 13C resonance assignments of the heme-binding protein murine p22HBP. *J. Biomol. NMR* 32: 338.
- Migeotte, I., et al. 2005. Identification and characterization of an endogenous chemotactic ligand specific for FPRL2. *J. Exp. Med.* 201: 83-93.
- Dias, J.S., et al. 2006. The first structure from the SOUL/HBP family of heme-binding proteins, murine P22HBP. *J. Biol. Chem.* 281: 31553-31561.

## CHROMOSOMAL LOCATION

Genetic locus: HEBP1 (human) mapping to 12p13.1; Hebp1 (mouse) mapping to 6 G1.

## SOURCE

p22HBP (B-3) is a mouse monoclonal antibody raised against amino acids 26-138 mapping within an internal region of p22HBP of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

p22HBP (B-3) is available conjugated to agarose (sc-398612 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398612 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398612 PE), fluorescein (sc-398612 FITC), Alexa Fluor<sup>®</sup> 488 (sc-398612 AF488), Alexa Fluor<sup>®</sup> 546 (sc-398612 AF546), Alexa Fluor<sup>®</sup> 594 (sc-398612 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-398612 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-398612 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-398612 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

p22HBP (B-3) is recommended for detection of p22HBP 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).

Suitable for use as control antibody for p22HBP siRNA (h): sc-62739, p22HBP siRNA (m): sc-62740, p22HBP shRNA Plasmid (h): sc-62739-SH, p22HBP shRNA Plasmid (m): sc-62740-SH, p22HBP shRNA (h) Lentiviral Particles: sc-62739-V and p22HBP shRNA (m) Lentiviral Particles: sc-62740-V.

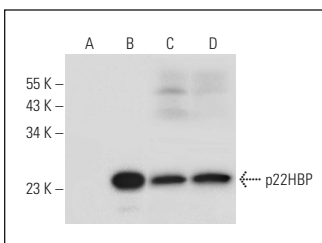
Molecular Weight of p22HBP: 22 kDa.

Positive Controls: p22HBP (h3): 293T Lysate: sc-111835, HeLa whole cell lysate: sc-2200 or Y79 cell lysate: sc-2240.

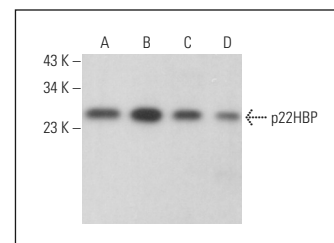
## RECOMMENDED SUPPORT REAGENTS

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<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



p22HBP (B-3): sc-398612. Western blot analysis of p22HBP expression in non-transfected 293T: sc-117752 (A), human p22HBP transfected 293T: sc-111835 (B), HeLa (C) and Y79 (D) whole cell lysates.



p22HBP (B-3): sc-398612. Western blot analysis of p22HBP expression in HeLa (A), MCF7 (B), A549 (C) and BT-20 (D) whole cell lysates.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.