SANTA CRUZ BIOTECHNOLOGY, INC.

p22HBP siRNA (m): sc-62740

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-methyl-protoporphyrin 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

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2. Jacob Blackmon, B., et al. 2002. Characterization of a human and mouse tetrapyrrole-binding protein. Arch. Biochem. Biophys. 407: 196-201.
3. Dias, J.S., et al. 2005. 1H, 15N and 13C resonance assignments of the heme-binding protein murine p22HBP. J. Biomol. NMR 32: 338.
4. Migeotte, I., et al. 2005. Identification and characterization of an endogenous chemotactic ligand specific for FPRL2. J. Exp. Med. 201: 83-93.
5. 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.
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CHROMOSOMAL LOCATION

Genetic locus: Hebp1 (mouse) mapping to 6 G1.

PRODUCT

p22HBP siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see p22HBP shRNA Plasmid (m): sc-62740-SH and p22HBP shRNA (m) Lentiviral Particles: sc-62740-V as alternate gene silencing products.

For independent verification of p22HBP (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-62740A, sc-62740B and sc-62740C.

RESEARCH USE

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

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

p22HBP siRNA (m) is recommended for the inhibition of p22HBP expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

GENE EXPRESSION MONITORING

p22HBP (B-3): sc-398612 is recommended as a control antibody for monitoring of p22HBP gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor p22HBP gene expression knockdown using RT-PCR Primer: p22HBP (m)-PR: sc-62740-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.