SANTA CRUZ BIOTECHNOLOGY, INC.

EBP siRNA (h): sc-77218

BACKGROUND

EBP (emopamil-binding protein), also known as CPX, CHO2, CPXD or CDPX2, is a 230 amino acid multi-pass membrane protein that localizes to the endoplasmic reticulum (ER) and is involved in steroid biosynthesis. Functioning to catalyze the conversion of Δ^8-sterols to their corresponding Δ^7-isomers, EBP plays an important role in drug transport and cholesterol metabolism within the ER. Defects in the gene encoding EBP are the cause of chondrodysplasia punctata X-linked dominant type 2 (CDPX2), a heterogeneous disorder that is caused by defective cholesterol biosynthesis. CDPX2 is characterized by punctiform calcification of the bones leading to linear ichthyosis, cataracts and short stature.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: EBP (human) mapping to Xp11.23.

PRODUCT

EBP siRNA (h) 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 EBP shRNA Plasmid (h): sc-77218-SH and EBP shRNA (h) Lentiviral Particles: sc-77218-V as alternate gene silencing products.

For independent verification of EBP (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-77218A, sc-77218B and sc-77218C.

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

EBP siRNA (h) is recommended for the inhibition of EBP expression in human 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

EBP (A-9): sc-374267 is recommended as a control antibody for monitoring of EBP 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 EBP gene expression knockdown using RT-PCR Primer: EBP (h)-PR: sc-77218-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.