SANTA CRUZ BIOTECHNOLOGY, INC.

EAP1 siRNA (h): sc-92164

BACKGROUND

EAP1 (enhanced at puberty protein 1), also known as IRF2BPL (interferon regulatory factor 2 binding protein-like) or C14orf4, is a 796 amino acid protein belonging to the IRF2BP family. Localizing to nucleus, EAP1 is highly expressed in heart, with moderate expression in skeletal muscle and pancreas, and weak expression found in brain, kidney, liver, testis, thyroid gland and lymphocytes. Expression levels of EAP1 increase during puberty, notably in medial basal hypothalamus. Thought to contribute to female reproductive function as an upstream transcriptional regulator of neuronal networks, EAP1 may also participate in gene transcription as an activator of GnRH I promoter and as a repressor of the synenkephalin promoter.The gene encoding EAP1 maps to human chromosome 14q24.3. Chromosome 14 contains about 700 genes and 106 million base pairs and makes up about 3.5% of human cellular DNA.

REFERENCES

1. Rampazzo, A., et al. 2000. Characterization of C14orf4, a novel intronless human gene containing a polyglutamine repeat, mapped to the ARVD1 critical region. Biochem. Biophys. Res. Commun. 278: 766-774.
2. Heilig, R., et al. 2003. The DNA sequence and analysis of human chromosome 14. Nature 421: 601-607.
3. Drögemüller, C., et al. 2004. Mapping of the bovine homologue of the human chromosome 14 open reading frame 4 gene to BTA10q36. Anim. Genet. 35: 498-499.
4. Li, F., et al. 2007. Eap1p, an adhesin that mediates *Candida albicans* biofilm formation *in vitro* and *in vivo*. Eukaryot. Cell 6: 931-939.
5. Heger, S., et al. 2007. Enhanced at puberty 1 is a new transcriptional regulator of the female neuroendocrine reproductive axis. J. Clin. Invest. 117: 2145-2154.
6. Li, F. and Palecek, S.P. 2008. Distinct domains of the *Candida albicans* adhesin Eap1p mediate cell-cell and cell-substrate interactions. Microbiology 154: 1193-1203.
7. Matagne, V., et al. 2009. Hypothalamic expression of Eap1 is not directly controlled by ovarian steroids. Endocrinology 150: 1870-1878.

CHROMOSOMAL LOCATION

Genetic locus: IRF2BPL (human) mapping to 14q24.3.

PRODUCT

EAP1 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 EAP1 shRNA Plasmid (h): sc-92164-SH and EAP1 shRNA (h) Lentiviral Particles: sc-92164-V as alternate gene silencing products.

For independent verification of EAP1 (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-92164A, sc-92164B and sc-92164C.

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

EAP1 siRNA (h) is recommended for the inhibition of EAP1 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

EAP1 (C-9): sc-514772 is recommended as a control antibody for monitoring of EAP1 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 EAP1 gene expression knockdown using RT-PCR Primer: EAP1 (h)-PR: sc-92164-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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

PROTOCOLS

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