SANTA CRUZ BIOTECHNOLOGY, INC.

Bex5 siRNA (h): sc-91288

BACKGROUND

Bex5 (brain-expressed X-linked protein 5), also known as nerve growth factor receptor-associated protein 2 or NGFRAP1-like protein 1, is a 111 amino acid protein that belongs to the Bex family. Bex5, like other members of the Bex gene family, contains three exons, with the third exon containing the entire open reading frame and the majority of the transcript. Bex5 localizes to cytoplasm and is widely expressed at low levels, with highest expression in liver; however, Bex5 is expressed at lower levels than other Bex genes. Bex5 has been identified in monkey but not in rodents, suggesting that mice lost the Bex5 gene during evolution after mice and humans diverged. The region of the mouse X chromosome that corresponds to the region of the human X chromosome where Bex5 is located is truncated in mice, lending credence to this theory. Chromosome X consists of about 153 million base pairs and nearly 1,000 genes.

REFERENCES

1. Elias, D., et al. 1983. Locating parathyroid glands by methylene blue during thyroid surgery. Presse Med. 12: 1229-1231.
2. Bernardino-Sgherri, J., et al. 2002. Overall DNA methylation and chromatin structure of normal and abnormal X chromosomes. Cytogenet. Genome Res. 99: 85-91.
3. Behrens, M., et al. 2003. Identification of members of the Bex gene family as olfactory marker protein (OMP) binding partners. J. Neurochem. 86: 1289-1296.
4. Winter, E.E., et al. 2005. Mammalian BEX, WEX and GASP genes: coding and non-coding chimaerism sustained by gene conversion events. BMC Evol. Biol. 5: 54.
5. Alvarez, E., et al. 2005. Characterization of the Bex gene family in humans, mice, and rats. Gene 357: 18-28.
6. Koo, J.H., et al. 2005. Immunolocalization of Bex protein in the mouse brain and olfactory system. J. Comp. Neurol. 487: 1-14.

CHROMOSOMAL LOCATION

Genetic locus: BEX5 (human) mapping to Xq22.1.

PRODUCT

Bex5 siRNA (h) is a pool of 2 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 Bex5 shRNA Plasmid (h): sc-91288-SH and Bex5 shRNA (h) Lentiviral Particles: sc-91288-V as alternate gene silencing products.

For independent verification of Bex5 (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-91288A and sc-91288B.

PROTOCOLS

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

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

Bex5 siRNA (h) is recommended for the inhibition of Bex5 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Bex5 gene expression knockdown using RT-PCR Primer: Bex5 (h)-PR: sc-91288-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.