SANTA CRUZ BIOTECHNOLOGY, INC.

Bex3 siRNA (m): sc-62018

BACKGROUND

The brain-expressed X-linked (Bex) family of proteins is expressed in the central nervous system, with highest levels detected in cerebellum, temporal lobe and pituitary tissues. Bex3, also known as p75NTR-associated cell death executor (NADE), nerve growth factor receptor-associated protein 1 or ovarian granulosa cell 13 kDa protein HGR74, is a member of the Bex family involved in zinc-triggered neuronal cell death. It can be found in prostate, testis, liver, ovarian granulosa cells and seminal vesicle tissue shuttling between the cytoplasm and the nucleus. Bex3 interacts with Smac (second mitochondria-derived activator of caspase) via its C-terminal and regulates apoptosis by the inhibition of Smac ubiquitination. Bex3 also interacts with itself and the NGFR p75 death domain. Bex3 may play a significant role in the pathogenosis of neurogenetic diseases.

REFERENCES

1. Mukai, J., et al. 2000. NADE, a p75NTR-associated cell death executor, is involved in signal transduction mediated by the common neurotrophin receptor p75NTR. J. Biol. Chem. 275: 17566-17570.
2. Mukai, J., et al. 2002. Structure-function analysis of NADE: identification of regions that mediate nerve growth factor-induced apoptosis. J. Biol. Chem. 277: 13973-13982.
3. Kendall, S.E., et al. 2003. Characterization of NADE, NRIF and SC-1 gene expression during mouse neurogenesis. Brain Res. Dev. Brain Res. 144: 151-158.
4. Mukai, J., et al. 2003. Nerve growth factor-dependent regulation of NADE-induced apoptosis. Vitam. Horm. 66: 385-402.
5. Kim, A.J., et al. 2004. Bex3 associates with replicating mitochondria and is involved in possible growth control of F9 teratocarcinoma cells. Gene 343: 79-89.
6. Yoon, K., et al. 2004. Direct interaction of Smac with NADE promotes TRAIL-induced apoptosis. Biochem. Biophys. Res. Commun. 319: 649-654.

CHROMOSOMAL LOCATION

Genetic locus: Ngfrap1 (mouse) mapping to X F1.

PRODUCT

Bex3 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 Bex3 shRNA Plasmid (m): sc-62018-SH and Bex3 shRNA (m) Lentiviral Particles: sc-62018-V as alternate gene silencing products.

For independent verification of Bex3 (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-62018A, sc-62018B and sc-62018C.

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

Bex3 siRNA (m) is recommended for the inhibition of Bex3 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Bex3 gene expression knockdown using RT-PCR Primer: Bex3 (m)-PR: sc-62018-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.