SANTA CRUZ BIOTECHNOLOGY, INC.

BIRC8 siRNA (h): sc-97225

BACKGROUND

The RING-type zinc-finger motif is present in a number of viral and eukaryotic proteins and is made of a conserved cysteine-rich domain that is able to bind two zinc atoms. BIRC8 (baculoviral IAP repeat-containing 8), also known as ILP2, is a 236 amino acid protein that localizes to the cytoplasm and contains one BIR repeat and one RING-type zinc-finger motif. Expressed in normal testis, as well as in cancerous tissue, BIRC8 functions to protect cells against Bax-mediated apoptosis, suggesting a possible role in tumor transformation and progression. The gene encoding BIRC8 maps to human chromosome 19, which is the genetic home for a number of immunoglobulin superfamily members, including the killer cell and leukocyte Ig-like receptors, several ICAMs, the CEACAM and PSG family and Fc receptors (FcRs). Key genes for eye color and hair color also map to chromosome 19.

REFERENCES

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2. Lorick, K.L., et al. 1999. RING fingers mediate ubiquitin-conjugating enzyme (E2)-dependent ubiquitination. Proc. Natl. Acad. Sci. USA 96: 11364-11369.
3. Lagace, M., et al. 2001. Genomic organization of the X-linked inhibitor of apoptosis and identification of a novel testis-specific transcript. Genomics 77: 181-188.
4. Richter, B.W., et al. 2001. Molecular cloning of ILP-2, a novel member of the inhibitor of apoptosis protein family. Mol. Cell. Biol. 21: 4292-4301.
5. Jin, X., et al. 2002. Induction of human inhibitor of apoptosis protein-2 by shear stress in endothelial cells. FEBS Lett. 529: 286-292.
6. Shin, H., et al. 2005. The BIR domain of IAP-like protein 2 is conformationally unstable: implications for caspase inhibition. Biochem. J. 385: 1-10.
7. Abe, S., et al. 2005. Bone marrow cells of myelodysplastic syndromes exhibit significant expression of apollon, livin and ILP-2 with reduction after transformation to overt leukemia. Leuk. Res. 29: 1095-1096.

CHROMOSOMAL LOCATION

Genetic locus: BIRC8 (human) mapping to 19q13.41.

PRODUCT

BIRC8 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 BIRC8 shRNA Plasmid (h): sc-97225-SH and BIRC8 shRNA (h) Lentiviral Particles: sc-97225-V as alternate gene silencing products.

For independent verification of BIRC8 (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-97225A, sc-97225B and sc-97225C.

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

BIRC8 siRNA (h) is recommended for the inhibition of BIRC8 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 BIRC8 gene expression knockdown using RT-PCR Primer: BIRC8 (h)-PR: sc-97225-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.