SANTA CRUZ BIOTECHNOLOGY, INC.

BCL2L12 siRNA (m): sc-141674

BACKGROUND

Apoptosis is defined as a set of cascades which, when initiated, programs the cell to undergo lethal changes such as membrane blebbing, mitochondrial break down and DNA fragmentation. Bcl-2 is one among many key regulators of apoptosis, which are essential for proper development, tissue homeostasis, and protection against foreign pathogens. Human Bcl-2 is an anti-apoptotic, membrane-associated oncoprotein that can promote cell survival through protein-protein interactions with other Bcl-2 related family members, such as the death suppressors Bcl-x_L, Mcl-1, Bcl-w, and A1 or the death agonists Bax, Bak, Bik, Bad, and Bid. Bcl-2 protein family members form hetero- or homodimers that act as apoptotic regulators that are involved in a variety of cellular activities. BCL2L12, also known as BPR, is a 334 amino acid protein belonging to the Bcl-2 family. Expressed as two isoforms produced by alternative splicing, BCL2L12 is present in prostate, breast, small intestine, pancreas, thymus, colon and spinal chord.

REFERENCES

1. Scorilas, A., et al. 2001. Molecular cloning, physical mapping, and expression analysis of a novel gene, BCL2L12, encoding a proline-rich protein with a highly conserved BH2 domain of the Bcl-2 family. Genomics 72: 217-221.
2. Hammond, P.W., et al. 2001. *In vitro* selection and characterization of Bcl-x_L-binding proteins from a mix of tissue-specific mRNA display libraries. J. Biol. Chem. 276: 20898-20906.
3. Talieri, M., et al. 2003. Expression of BCL2L12, a new member of apoptosis-related genes, in breast tumors. Thromb. Haemost. 89: 1081-1088.
4. Mathioudaki, K., et al. 2004. Expression analysis of BCL2L12, a new member of apoptosis-related genes, in colon cancer. Biol. Chem. 385: 779-783.
5. Hong, Y., et al. 2008. Knockdown of BCL2L12 leads to cisplatin resistance in MDA-MB-231 breast cancer cells. Biochim. Biophys. Acta 1782: 649-657.
6. Kontos, C.K., et al. 2008. Quantitative expression analysis and prognostic significance of the novel apoptosis-related gene BCL2L12 in colon cancer. Biol. Chem. 389: 1467-1475.
7. Stegh, A.H., et al. 2008. BCL2L12 inhibition of effector caspase-3 and caspase-7 via distinct mechanisms in glioblastoma. Proc. Natl. Acad. Sci. USA 105: 10703-10708.

CHROMOSOMAL LOCATION

Genetic locus: Bcl2l12 (mouse) mapping to 7 B4.

PRODUCT

BCL2L12 siRNA (m) is a target-specific 19-25 nt siRNA 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 BCL2L12 shRNA Plasmid (m): sc-141674-SH and BCL2L12 shRNA (m) Lentiviral Particles: sc-141674-V as alternate gene silencing 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

BCL2L12 siRNA (m) is recommended for the inhibition of BCL2L12 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 BCL2L12 gene expression knockdown using RT-PCR Primer: BCL2L12 (m)-PR: sc-141674-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1 Zhang, Y.Y., et al. 2021. Modulating oxidative stress counteracts specific antigen-induced regulatory T cell apoptosis in mice. Eur. J. Immunol. 51: 1748-1761.
2. Chandrakar, P., et al. 2021. Jagged-Notch-mediated divergence of immune cell crosstalk maintains the anti-inflammatory response in visceral leishmaniasis. J. Cell Sci. 134: jcs252494.

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.