SANTA CRUZ BIOTECHNOLOGY, INC.

Gas2L3 siRNA (m): sc-145333

BACKGROUND

Gas2, a 313 amino acid protein, is ubiquitously expressed with highest levels found in liver, lung and kidney, and is thought to play a role in apoptosis by acting as a cell death substrate for caspases. One of several components of the microfilament system, Gas2 is cleaved by either caspase-3 or caspase-7 at Asp 278 during apoptosis, an event which induces the rearrangement of the Actin cytoskeleton and causes potent changes in the shape of the affected cell. Gas2L3 (growth arrest-specific 2 like 3) is a 694 amino acid protein that contains one calponin-homology (CH) domain and may function in a similar manner to Gas2. The gene encoding Gas2L3 maps to human chromosome 12, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome.

REFERENCES

1. Fleming, J.V., et al. 1998. Effects of nutrient deprivation and differentiation on the expression of growth-arrest genes (Gas and GADD) in F9 embryonal carcinoma cells. Biochem. J. 330: 573-579.
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3. Sgorbissa, A., et al. 2000. Caspase-3 and caspase-7 but not caspase-6 cleave Gas2 *in vitro:* implications for microfilament reorganization during apoptosis. J. Cell Sci. 112: 4475-4482.
4. Benetti, R., et al. 2001. The death substrate Gas2 binds μ-calpain and increases susceptibility to p53-dependent apoptosis. EMBO J. 20: 2702-2714.
5. Goriounov, D., et al. 2003. Protein products of human Gas2-related genes on chromosomes 17 and 22 (hGAR17 and hGAR22) associate with both microfilaments and microtubules. J. Cell Sci. 116: 1045-1058.
6. Brockman, J.L. and Schuler, L.A. 2005. Prolactin signals via Stat5 and Oct-1 to the proximal cyclin D1 promoter. Mol. Cell. Endocrinol. 239: 45-53.
7. Ragni, E., et al. 2007. The Gas family of proteins of *Saccharomyces cerevisiae:* characterization and evolutionary analysis. Yeast 24: 297-308.

CHROMOSOMAL LOCATION

Genetic locus: Gas2l3 (mouse) mapping to 10 C2.

PRODUCT

Gas2L3 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 Gas2L3 shRNA Plasmid (m): sc-145333-SH and Gas2L3 shRNA (m) Lentiviral Particles: sc-145333-V as alternate gene silencing products.

For independent verification of Gas2L3 (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-145333A, sc-145333B and sc-145333C.

RESEARCH USE

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

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

Gas2L3 siRNA (m) is recommended for the inhibition of Gas2L3 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 Gas2L3 gene expression knockdown using RT-PCR Primer: Gas2L3 (m)-PR: sc-145333-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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