SANTA CRUZ BIOTECHNOLOGY, INC.

Gas1 siRNA (m): sc-37436

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The Power to Question

BACKGROUND

Growth arrest specific proteins, including Gas1 and Gas6, are activated in quiescent cells. Gas1-induced growth arrest is mediated by p53, and Gas1 appears to be able to suppress tumor cell growth. Gas6, a ligand for the tyrosine kinase receptor Axl, was initially identified as a member of the vitamin K-dependent protein family and exhibits a high degree of amino acid sequence homology to protein S, a negative co-regulator in the coagulation pathway.

REFERENCES

1. Schneider, C., et al. 1988. Genes specifically expressed at growth arrest of mammalian cells. Cell 54: 787-793.
2. Del Sal, G., et al. 1992. The growth arrest-specific gene, Gas1, is involved in growth suppression. Cell 70: 595-607.
3. Manfioletti, G., et al. 1993. The protein encoded by a growth arrest-specific gene (Gas6) is a new member of the vitamin K-dependent proteins related to protein S, a negative coregulator in the blood coagulation cascade. Mol. Cell. Biol. 13: 4976-4985.
4. Del Sal, G., et al. 1994. Structure, function, and chromosome mapping of the growth-suppressing human homologue of the murine Gas1 gene. Proc. Natl. Acad. Sci. USA 91: 1848-1852.
5. Del Sal, G., et al. 1995. Gas1-induced growth suppression requires a transactivation-independent p53 function. Mol. Cell. Biol. 15: 7152-7160.
6. Stitt, T.N., et al. 1995. The anticoagulation factor protein S and its relative, Gas6, are ligands for the Tyro 3/Axl family of receptor tyrosine kinases. Cell 80: 661-670.

CHROMOSOMAL LOCATION

Genetic locus: Gas1 (mouse) mapping to 13 B2.

PRODUCT

Gas1 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 Gas1 shRNA Plasmid (m): sc-37436-SH and Gas1 shRNA (m) Lentiviral Particles: sc-37436-V as alternate gene silencing products.

For independent verification of Gas1 (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-37436A, sc-37436B and sc-37436C.

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

Gas1 siRNA (m) is recommended for the inhibition of Gas1 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 Gas1 gene expression knockdown using RT-PCR Primer: Gas1 (m)-PR: sc-37436-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. Agopiantz, M., et al. 2017. Growth arrest specific 1 (Gas1) and glial cell line-derived neurotrophic factor receptor α1 (Gfrα1), two mouse oocyte glycosylphosphatidylinositol-anchored proteins, are involved in fertilisation. Reprod. Fertil. Dev. 29: 824-837.
2. Fujii, T., et al. 2021. MEF2C regulates osteoclastogenesis and pathologic bone resorption via c-FOS. Bone Res. 9: 4.

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.