SANTA CRUZ BIOTECHNOLOGY, INC.

AGP-1/2 siRNA (h): sc-60133

BACKGROUND

AGP (α_1-acid glycoprotein) is an acute phase plasma protein synthesized by the liver. It functions to regulate the interaction between blood cells and endothelial cells, and together with haptoglobin and C reactive protein, it also mediates the extravasation of cells during infection and inflammation. Expression of AGP is induced by acute-phase stimulatory agents such as bacterial lipopolysaccharides. AGP has a high affinity, low capacity binding for basic drugs at physiological pH. In human plasma, AGP is found at levels of 0.5-1.4 mg/ml, though this is elevated during acute inflammation, and, as a result, levels of this protein can be used to diagnose inflammatory conditions. AGP-1 and AGP-2 contain five and six potential N-glycosylation sites, respectively. Abnormal expression of the APG-1 gene is linked to sarcoidosis and other immunogenetic diseases, while mutations in the APG-2 gene are associated with different types of carcinomas.

REFERENCES

1. Umetsu, K., et al. 1986. Orosomucoid (ORM) typing by print lectinofixation: a new technique for isoelectric focusing. Two common alleles in Japan. Hum. Genet. 71: 223-224.
2. Lee, S.C., et al. 1989. Molecular cloning of cDNAs corresponding to two genes of α_1-acid glycoprotein and characterization of two alleles of AGP-1 in the mouse. DNA 8: 245-251.
3. Carter, K.C., et al. 1991. Differential expression of the mouse α_1-acid glycoprotein genes (AGP-1 and AGP-2) during inflammation and aging. Biochim. Biophys. Acta 1089: 197-205.
4. Chang, C.J., et al. 1992. Structure and expression of mouse α_1-acid glycoprotein gene-3 (AGP-3). DNA Cell Biol. 11: 315-320.
5. Fan, C., et al. 1995. Synergistic interaction between ORM1 and C3 types in disease associations. Exp. Clin. Immunogenet. 12: 92-95.

CHROMOSOMAL LOCATION

Genetic locus: ORM1/ORM2 (human) mapping to 9q32.

PRODUCT

AGP-1/2 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 AGP-1/2 shRNA Plasmid (h): sc-60133-SH and AGP-1/2 shRNA (h) Lentiviral Particles: sc-60133-V as alternate gene silencing products.

For independent verification of AGP-1/2 (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-60133A, sc-60133B and sc-60133C.

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

AGP-1/2 siRNA (h) is recommended for the inhibition of AGP-1/2 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.

GENE EXPRESSION MONITORING

AGP-1/2 (F-4): sc-515724 is recommended as a control antibody for monitoring of AGP-1/2 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor AGP-1/2 gene expression knockdown using RT-PCR Primer: AGP-1/2 (h)-PR: sc-60133-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. Qin, X.Y., et al. 2017. Transcriptome analysis uncovers a growth-promoting activity of orosomucoid-1 on hepatocytes. EBioMedicine 24: 257-266.

RESEARCH USE

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