SANTA CRUZ BIOTECHNOLOGY, INC.

AGR3 siRNA (m): sc-61959

BACKGROUND

AGR3 (anterior gradient protein 3), also called AG3, BCMP11 (breast cancer membrane protein 11) or hAG-3, is a secreted extracellular protein. It is a member of the anterior gradient homolog family. AGR3 shares a high degree of sequence homology with AGR2, the human ortholog of XAG-2 (the secreted *Xenopus laevis* anterior gradient protein). AGR3 interacts with LYPD3 and α-dystroglycan. AGR3 is highly prevalent in breast cancers and may serve as a potential therapeutic marker.

REFERENCES

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2. Fletcher, G.C., et al. 2003. hAG-2 and hAG-3, human homologues of genes involved in differentiation, are associated with oestrogen receptor-positive breast tumours and interact with metastasis gene C4.4a and dystroglycan. Br. J. Cancer 88: 579-585.
3. Huber, M., et al. 2004. Comparison of proteomic and genomic analyses of the human breast cancer cell line T47D and the antiestrogen-resistant derivative T47D-r. Mol. Cell. Proteomics 3: 43-55.
4. Rundle, A. 2005. Molecular epidemiology of physical activity and cancer. Cancer Epidemiol. Biomarkers Prev. 14: 227-236.
5. Rundle, A.G., et al. 2005. Preliminary studies on the effect of moderate physical activity on blood levels of glutathione. Biomarkers 10: 390-400.
6. Persson, S., et al. 2005. Diversity of the protein disulfide isomerase family: identification of breast tumor induced Hag2 and Hag3 as novel members of the protein family. Mol. Phylogenet. Evol. 36: 734-740.
7. Zheng, W., et al. 2006. Evaluation of AGR2 and AGR3 as candidate genes for inflammatory bowel disease. Genes Immun. 7: 11-18.
8. Durand, G., et al. 2006. Detection of new methicillin-resistant *Staphylococcus aureus* clones containing the toxic shock syndrome toxin 1 gene responsible for hospital- and community-acquired infections in France. J. Clin. Microbiol. 44: 847-853.

CHROMOSOMAL LOCATION

Genetic locus: Agr3 (mouse) mapping to 12 A3.

PRODUCT

AGR3 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 AGR3 shRNA Plasmid (m): sc-61959-SH and AGR3 shRNA (m) Lentiviral Particles: sc-61959-V as alternate gene silencing products.

For independent verification of AGR3 (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-61959A, sc-61959B and sc-61959C.

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

AGR3 siRNA (m) is recommended for the inhibition of AGR3 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.

GENE EXPRESSION MONITORING

AGR3 (G-10): sc-390940 is recommended as a control antibody for monitoring of AGR3 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 AGR3 gene expression knockdown using RT-PCR Primer: AGR3 (m)-PR: sc-61959-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.