

DAAM2 siRNA (h): sc-62192

BACKGROUND

DAAM2 (disheveled associated activator of morphogenesis 2), also known as KIAA0381, is a widely expressed 1,068 amino acid protein that contains one DAD domain, one FH1 domain, one FH2 domain and one GBD domain, through which it may play a role in Wnt/frizzled-associated signaling events. The gene encoding DAAM2 maps to human chromosome 6p21.2, which contains 170 million base pairs and comprises nearly 6% of the human genome. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer, suggesting the presence of a cancer susceptibility locus. Additionally, porphyria cutanea tarda, Parkinson's disease, Stickler syndrome and a susceptibility to bipolar disorder are all associated with genes that map to chromosome 6.

REFERENCES

1. Nagase, T., et al. 1997. Prediction of the coding sequences of unidentified human genes. VII. The complete sequences of 100 new cDNA clones from brain which can code for large proteins *in vitro*. DNA Res. 4: 141-150.
2. Habas, R., et al. 2001. Wnt/frizzled activation of Rho regulates vertebrate gastrulation and requires a novel formin homology protein DAAM1. Cell 107: 843-854.
3. Katoh, M., et al. 2003. Identification and characterization of human DAAM2 gene in silico. Int. J. Oncol. 22: 915-920.
4. Kida, Y., et al. 2004. Identification of chick and mouse DAAM1 and DAAM2 genes and their expression patterns in the central nervous system. Brain Res. Dev. Brain Res. 153: 143-150.

CHROMOSOMAL LOCATION

Genetic locus: DAAM2 (human) mapping to 6p21.2.

PRODUCT

DAAM2 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see DAAM2 shRNA Plasmid (h): sc-62192-SH and DAAM2 shRNA (h) Lentiviral Particles: sc-62192-V as alternate gene silencing products.

For independent verification of DAAM2 (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-62192A, sc-62192B and sc-62192C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

DAAM2 siRNA (h) is recommended for the inhibition of DAAM2 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 μ M in 66 μ l. 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

DAAM2 (E-1): sc-515129 is recommended as a control antibody for monitoring of DAAM2 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 DAAM2 gene expression knockdown using RT-PCR Primer: DAAM2 (h)-PR: sc-62192-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Fang, X., et al. 2020. Dishevelled associated activator of morphogenesis (DAAM) facilitates invasion of hepatocellular carcinoma by upregulating hypoxia-inducible factor 1 α (HIF-1 α) expression. Med. Sci. Monit. 26: e924670.

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.