SANTA CRUZ BIOTECHNOLOGY, INC.

Dysadherin siRNA (h): sc-45745

BACKGROUND

Dysadherin (FXYD domain-containing ion transport regulator 5) is a cancer-associated cell membrane glycoprotein. Dysadherin down-regulates the expression of E-cadherin, the prime mediator of cell-cell adhesion in epithelial cells, by a posttranscriptional mechanism. Decreasing intercellular adhesiveness facilitates the metastasis of cancer cells. Dysadherin is present in spleen, lung, skeletal muscle, and testis tissue, and maps to human chromosome 19q13.12.

REFERENCES

1. Ino, Y., et al. 2002. Dysadherin, a cancer-associated cell membrane glycoprotein, downregulates E-cadherin and promotes metastasis. Proc. Natl. Acad. Sci. USA 99: 365-370.
2. Shimamura, T., et al. 2003. Dysadherin overexpression in pancreatic ductal adenocarcinoma reflects tumor aggressiveness: relationship to E-cadherin expression. J. Clin. Oncol. 21: 659-667.
3. Hirohashi, S., et al. 2003. Cell adhesion system and human cancer morphogenesis. Cancer Sci. 94: 575-581.
4. Sato, H., et al. 2003. Dysadherin: expression and clinical significance in thyroid carcinoma. J. Clin. Endocrinol. Metab. 88: 4407-4412.
5. Wu, D., et al. 2004. Prognostic significance of Dysadherin expression in cervical squamous cell carcinoma. Pathol. Oncol. Res. 10: 212-218.
6. Shimamura, T., et al. 2004. Dysadherin expression facilitates cell motility and metastatic potential of human pancreatic cancer cells. Cancer Res. 64: 6989-6995.

CHROMOSOMAL LOCATION

Genetic locus: FXYD5 (human) mapping to 19q13.12.

PRODUCT

Dysadherin 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 Dysadherin shRNA Plasmid (h): sc-45745-SH and Dysadherin shRNA (h) Lentiviral Particles: sc-45745-V as alternate gene silencing products.

For independent verification of Dysadherin (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-45745A, sc-45745B and sc-45745C.

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

Dysadherin siRNA (h) is recommended for the inhibition of Dysadherin 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

Dysadherin (E-12): sc-515254 is recommended as a control antibody for monitoring of Dysadherin 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 Dysadherin gene expression knockdown using RT-PCR Primer: Dysadherin (h)-PR: sc-45745-PR (20 µl, 402 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Tokhtaeva, E., et al. 2016. The O-glycosylated ectodomain of FXYD5 impairs adhesion by disrupting cell-cell *trans*-dimerization of Na,K-ATPase β1 subunits. J. Cell Sci. 129: 2394-2406.
2. Brazee, P.L., et al. 2017. FXYD5 is an essential mediator of the inflammatory response during lung injury. Front. Immunol. 8: 623.
3. Besso, M.J., et al. 2019. FXYD5/dysadherin, a biomarker of endometrial cancer myometrial invasion and aggressiveness: its relationship with TGF-β1 and NFκB pathways. Front. Oncol. 9: 1306.
4. Liu, Y.K., et al. 2021. Low expression of FXYD5 reverses the cisplatin resistance of epithelial ovarian cancer cells. Histol. Histopathol. 36: 535-545.

RESEARCH USE

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