SANTA CRUZ BIOTECHNOLOGY, INC.

Dysadherin (D-2): sc-166782

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Dysadherin (FXYD domain-containing ion transport regulator 5) is a cancer-associated cell membrane glycoprotein. Dysadherin downregulates 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. and Kanai, Y. 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.

CHROMOSOMAL LOCATION

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

SOURCE

Dysadherin (D-2) is a mouse monoclonal antibody raised against amino acids 1-178 representing full length Dysadherin of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Dysadherin (D-2) is recommended for detection of Dysadherin isoform 1 and 2 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Dysadherin siRNA (h): sc-45745, Dysadherin shRNA Plasmid (h): sc-45745-SH and Dysadherin shRNA (h) Lentiviral Particles: sc-45745-V.

Molecular Weight (predicted) of Dysadherin: 19 kDa.

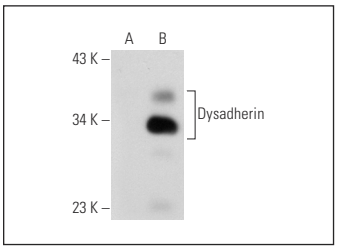
Molecular Weight (observed) of Dysadherin: 35/47 kDa.

Positive Controls: Dysadherin (h): 293 Lysate: sc-111349, CCRF-CEM cell lysate: sc-2225 or JAR cell lysate: sc-2276.

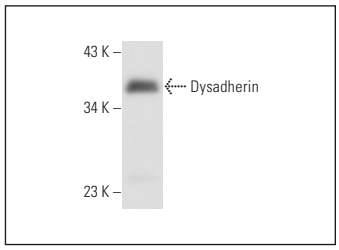
RECOMMENDED SUPPORT REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



Dysadherin (D-2): sc-166782. Western blot analysis of Dysadherin expression in non-transfected: sc-110760 (**A**) and human Dysadherin transfected: sc-111349 (**B**) 293 whole cell lysates.



Dysadherin (D-2): sc-166782. Western blot analysis of Dysadherin expression in CCRF-CEM whole cell lysate.

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. Lubarski-Gotliv, I., et al. 2016. FXYD5 has a pro-inflammatory role in epithelial cells. J. Biol. Chem. 291: 11072-11082.
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. Hostrup, M., et al. 2023. High-intensity training represses FXYD5 and glycosylates Na,K-ATPase in type II muscle fibres, which are linked with improved muscle K^+ handling and performance. Int. J. Mol. Sci. 24: 5587.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

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.