

DSC3 (I-17): sc-18125

BACKGROUND

The desmosomal cadherin desmocollin DSC1 is expressed in upper epidermis where strong adhesion is required. DSC1 is a type I membrane protein required for strong adhesion and barrier maintenance in epidermis and contributes to epidermal differentiation. DSC3 is also a type I membrane protein and is expressed in all living epidermal layers as well as in glandular ducts and in basal matrix cells and the outer root sheath of hair follicles. DSC3, but not DSC1, is also present in desmosomes of the basal and suprabasal cell layers of other stratified epithelia such as cervix, tongue and esophagus as well as in cells of the basal layer of bladder urothelium and the complex epithelium of trachea. The DSC1 gene comprises 17 exons spanning approximately 33 kb on 18q12.1, and the DSC3 gene comprises 17 exons spanning approximately 49 kb on 18q12.1. Alternative splicing gives rise to two DSC1 and DSC3 isoforms, designated 1A and 1B, and 3A and 3B, respectively, which differ in their carboxy-termini. DSC1 and DSC3 may contribute to epidermal cell positioning by mediating differential adhesiveness between cells that express different isoforms.

REFERENCES

1. Nuber, U.A., Schafer, S., Stehr, S., Rackwitz, H.R. and Franke, W.W. 1996. Patterns of desmocollin synthesis in human epithelia: immunolocalization of desmocollins 1 and 3 in special epithelia and in cultured cells. *Eur. J. Cell Biol.* 71: 1-13.
2. Whittock, N.V., Hunt, D.M., Rickman, L., Malhi, S., Vogazianou, A.P., Dawson, L.F., Eady, R.A., Buxton, R.S. and McGrath, J.A. 2000. Genomic organization and amplification of the human desmosomal cadherin genes DSC1 and DSC3, encoding desmocollin types 1 and 3. *Biochem. Biophys. Res. Commun.* 276: 454-460.
3. Chidgey, M., Brakebusch, C., Gustafsson, E., Cruchley, A., Hail, C., Kirk, S., Merritt, A., North, A., Tselepis, C., Hewitt, J., Byrne, C., Fassler, R. and Garrod, D. 2001. Mice lacking desmocollin 1 show epidermal fragility accompanied by barrier defects and abnormal differentiation. *J. Cell Biol.* 155: 821-832.
4. SWISS-PROT/TrEMBL (GI: 2493423). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

CHROMOSOMAL LOCATION

Genetic locus: DSC3 (human) mapping to 18q12.1; Dsc3 (mouse) mapping to 18 A2.

SOURCE

DSC3 (I-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of DSC3 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-18125 PE, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DSC3 (I-17) is recommended for detection of DSC3A and DSC3B of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, 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 DSC3 siRNA (h): sc-43111, DSC3 siRNA (m): sc-43112, DSC3 shRNA Plasmid (h): sc-43111-SH, DSC3 shRNA Plasmid (m): sc-43112-SH, DSC3 shRNA (h) Lentiviral Particles: sc-43111-V and DSC3 shRNA (m) Lentiviral Particles: sc-43112-V.

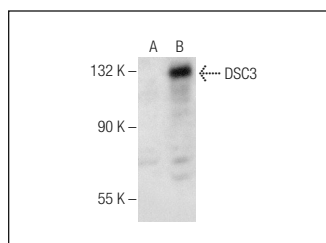
Molecular Weight of DSC3: 100 kDa.

Positive Controls: DSC3 (m): 293T Lysate: sc-178531 or A-431 whole cell lysate: sc-2201.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



DSC3 (I-17): sc-18125. Western blot analysis of DSC3 expression in non-transfected: sc-110760 (A) and mouse DSC3 transfected: sc-178531 (B) 293 whole cell lysates.

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 or our catalog for detailed protocols and support products.