

DSC3 (93-71): sc-81806

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. 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., et al. 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., et al. 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., et al. 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.

SOURCE

DSC3 (93-71) is a mouse monoclonal antibody raised against recombinant DSC3 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

DSC3 (93-71) is recommended for detection of DSC3A and DSC3B of 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 shRNA Plasmid (h): sc-43111-SH and DSC3 shRNA (h) Lentiviral Particles: sc-43111-V.

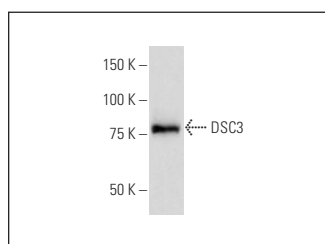
Molecular Weight of DSC3: 100 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201.

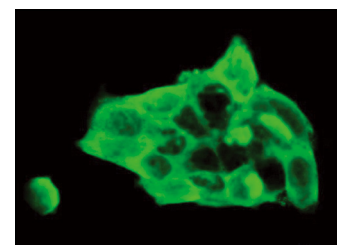
RECOMMENDED SUPPORT REAGENTS

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



DSC3 (93-71): sc-81806. Western blot analysis of DSC3 expression in A-431 whole cell lysate.



DSC3 (93-71): sc-81806. Immunofluorescence staining of paraformaldehyde-fixed A-431 cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Hao, X., et al. 2018. SOX30 is a key regulator of desmosomal gene suppressing tumor growth and metastasis in lung adenocarcinoma. *J. Exp. Clin. Cancer Res.* 37: 111.
2. Kippenberger, S., et al. 2018. Activation of PKB/Akt and p44/42 by mechanical stretch utilizes desmosomal structures and the keratin filament. *J. Dermatol. Sci.* 89: 241-247.
3. Ahram, M., et al. 2021. Androgen downregulates desmocollin-2 in association with induction of mesenchymal transition of breast MDA-MB-453 cancer cells. *Cytoskeleton* 78: 391-399.

RESEARCH USE

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