

desmoplakin I/II (H-300): sc-33555

BACKGROUND

Desmosomes are major cell adhesion junctions that are particularly prominent in the epidermis and in cardiac tissue and are important for the rigidity and strength of the cell. The desmosome consists of several proteins, of which desmoplakin is the most abundant. Desmoplakin plays an important role in the attachment of the filaments to the desmosome. Specifically, desmoplakin interacts with plakophilin 1 (PKP1), PKP2 or PKP3, or combinations thereof, to selectively recruit plakophilins to desmosomal plaques. Desmoplakin has also been shown to function as a transglutaminase substrate *in vitro*, suggesting that it may participate in cell adhesion at the intraepidermal level. Desmoplakin exists as a two-stranded coil structure. Alternative splicing gives rise to 2 isoforms, desmoplakin I and II, which differ by 600 amino acids.

CHROMOSOMAL LOCATION

Genetic locus: DSP (human) mapping to 6p24.3; Dsp (mouse) mapping to 13 A3.3.

SOURCE

desmoplakin I/II (H-300) is a rabbit polyclonal antibody raised against amino acids 79-300 mapping at the N-terminus of desmoplakin I of human origin.

PRODUCT

Each vial contains 200 µg IgG 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.

APPLICATIONS

desmoplakin I/II (H-300) is recommended for detection of desmoplakin I/II of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

desmoplakin I/II (H-300) is also recommended for detection of desmoplakin I/II in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for desmoplakin I/II siRNA (h): sc-43724, desmoplakin I/II siRNA (m): sc-45911, desmoplakin I/II shRNA Plasmid (h): sc-43724-SH, desmoplakin I/II shRNA Plasmid (m): sc-45911-SH, desmoplakin I/II shRNA (h) Lentiviral Particles: sc-43724-V and desmoplakin I/II shRNA (m) Lentiviral Particles: sc-45911-V.

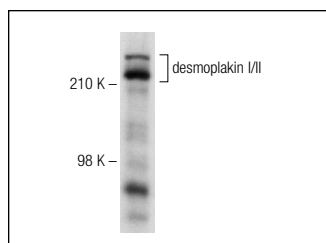
Molecular Weight of desmoplakin I/II: 250/210 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or MIA PaCa-2 cell lysate: sc-2285.

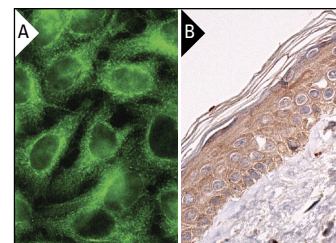
RESEARCH USE

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

DATA



desmoplakin I/II (H-300): sc-33555. Western blot analysis of desmoplakin I/II expression in HeLa whole cell lysate.



desmoplakin I/II (H-300): sc-33555. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of epidermal cells (B).

SELECT PRODUCT CITATIONS

- Joshi-Mukherjee, R., et al. 2008. Characterization of the molecular phenotype of two arrhythmogenic right ventricular cardiomyopathy (ARVC)-related plakophilin-2 (PKP2) mutations. *Heart Rhythm* 5: 1715-1723.
- Becker, S., et al. 2010. Overexpression of CD97 in intestinal epithelial cells of transgenic mice attenuates colitis by strengthening adherens junctions. *PLoS ONE* 5: e8507.
- Swamynathan, S., et al. 2011. Regulation of corneal epithelial barrier function by Krüppel-like transcription factor 4. *Invest. Ophthalmol. Vis. Sci.* 52: 1762-1769.
- Kenchegowda, D., et al. 2012. Critical role of Klf5 in regulating gene expression during post-eyelid opening maturation of mouse corneas. *PLoS ONE* 7: e44771.
- Maynadier, M., et al. 2012. Estrogens promote cell-cell adhesion of normal and malignant mammary cells through increased desmosome formation. *Mol. Cell. Endocrinol.* 364: 126-133.
- Chhatriwala, M.K., et al. 2012. Exons 5-15 of kazrin are dispensable for murine epidermal morphogenesis and homeostasis. *J. Invest. Dermatol.* 132: 1977-1987.
- Yasuda, K., et al. 2013. Drug transporters on arachnoid barrier cells contribute to the blood-cerebrospinal fluid barrier. *Drug Metab. Dispos.* 41: 923-931.

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Try **desmoplakin I/II (A-1): sc-390975** or **desmoplakin I/II (G-2): sc-373789**, our highly recommended monoclonal alternatives to desmoplakin I/II (H-300).