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Anti-Desmoglein-3 Antibody

Mouse Monoclonal Antibody
Catalog # AH13180

Product Information

Application	WB, IHC-P, IF, FC
Primary Accession	P32926
Other Accession	1925
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Clone Names	DSG3/1535
Calculated MW	107533

Additional Information

Gene ID	1830
Other Names	130kDa pemphigus vulgaris antigen (PVA); Balding (Bal); Cadherin family member 6 (CDHF6); Desmoglein-3 (DSG3)
Application Note	Flow Cytometry (0.5-1ug/million cells); Immunofluorescence (1-2ug/ml); ,Western Blotting (0.5-1.0ug/ml); ,Immunohistology (Formalin-fixed) (1-2ug/ml for 30 minutes at RT),(Staining of formalin-fixed tissues requires boiling tissue sections in 10mM Citrate buffer, pH 6.0, for 10-20 min followed by cooling at RT for 20 minutes),Optimal dilution for a specific application should be determined.
Format	200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	Anti-Desmoglein-3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

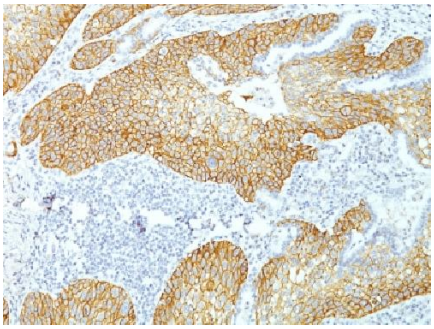
Name	DSG3 (HGNC:3050)
Synonyms	CDHF6
Function	A component of desmosome cell-cell junctions which are required for positive regulation of cellular adhesion (PubMed:31835537). Required for

	adherens and desmosome junction assembly in response to mechanical force in keratinocytes (PubMed:31835537). Required for desmosome-mediated cell-cell adhesion of cells surrounding the telogen hair club and the basal layer of the outer root sheath epithelium, consequently is essential for the anchoring of telogen hairs in the hair follicle (PubMed:9701552). Required for the maintenance of the epithelial barrier via promoting desmosome-mediated intercellular attachment of suprabasal epithelium to basal cells (By similarity). May play a role in the protein stability of the desmosome plaque components DSP, JUP, PKP1, PKP2 and PKP3 (PubMed:22294297). Required for YAP1 localization at the plasma membrane in keratinocytes in response to mechanical strain, via the formation of an interaction complex composed of DSG3, PKP1 and YWHAG (PubMed:31835537). May also be involved in the positive regulation of YAP1 target gene transcription and as a result cell proliferation (PubMed:31835537). Positively regulates cellular contractility and cell junction formation via organization of cortical F-actin bundles and anchoring of actin to tight junctions, in conjunction with RAC1 (PubMed:22796473). The cytoplasmic pool of DSG3 is required for the localization of CDH1 and CTNNB1 at developing adherens junctions, potentially via modulation of SRC activity (PubMed:22294297). Inhibits keratinocyte migration via suppression of p38MAPK signaling, may therefore play a role in moderating wound healing (PubMed:26763450).
Cellular Location	Cell membrane; Single-pass type I membrane protein. Cell junction, desmosome {ECO:0000250|UniProtKB:O35902}. Cytoplasm. Cell junction, tight junction. Cell junction
Tissue Location	Expressed throughout the basal and spinous layer of the epidermis with weak expression in the granular layer (at protein level) (PubMed:19717567). Expressed in skin and mucosa (at protein level) (PubMed:22294297, PubMed:30528827). Expressed in the basal layer of the outer root sheath of the telogen hair club, specifically at the cell membrane between the apex of the cells and the surrounding hair club (at protein level) (PubMed:9701552). Expression is less abundant between the lateral margins of the outer root sheath basal cells (at protein level) (PubMed:9701552). Also expressed in the tongue, tonsil and esophagus (PubMed:16740002).

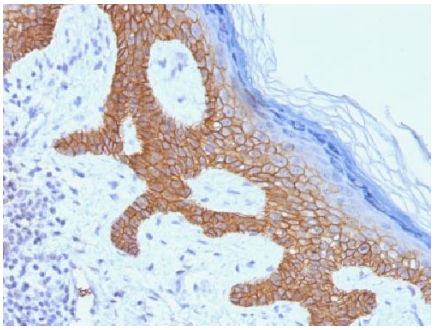
Background

Recognizes a protein of 130kDa, identified as Desmoglein-3 (DSG3). This MAb is highly specific to Desmoglein-3 and does not cross-react with other members of the Desmoglein-family. DSG3 is a calcium-binding transmembrane glycoprotein component of desmosomes in vertebrate epithelial cells. Research has shown that DSG3 has a very high sensitivity (>80%) and specificity (100%) in recognizing squamous cell carcinoma (SqCC). Therefore, DSG3 is considered a very important marker for lung SqCC and can be a useful ancillary marker to separate SqCC from other subtypes of lung cancer. Moreover, studies have shown that DSG3 expression in lung SqCC may indicate a poor prognosis.

Images



Formalin-paraffin Human Lung Squamous Cell Carcinoma stained with Desmoglein-3 Monoclonal Antibody (DSG3/1535).



Formalin-fixed, paraffin-embedded Human Skin stained with Desmoglein-3 Monoclonal Antibody (DSG3/1535).