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Anti-Desmoglein-1 (DSG1) Antibody

Mouse Monoclonal Antibody
Catalog # AH13166

Product Information

Application	WB, IF, FC
Primary Accession	Q02413
Other Accession	2633
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Clone Names	18D4
Calculated MW	113748

Additional Information

Gene ID	1828
Other Names	Cadherin family member 4; CDHF4; Desmoglein-1; Desmosomal glycoprotein 1; DG1; DSG1; EPKHE; EPKHIA; Pemphigus foliaceus antigen; PPKS1; SPPK1
Application Note	Flow Cytometry (0.5-1ug/million cells); ,Immunofluorescence (1-2ug/ml); ,Western Blotting (0.5-1.0ug/ml) ,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-1 (DSG1) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DSG1
Synonyms	CDHF4
Function	A component of desmosome cell-cell junctions which are required for positive regulation of cellular adhesion (PubMed:19717567). Promotes differentiation of keratinocytes via interaction with ERBIN. Reduces activation of RAS/ERK signaling pathways in keratinocytes via promoting ERBIN localization to the cell membrane and its interaction with SHOC2, this

	competitively reduces the formation of RAS-SHOC2 ERK-activating complexes (PubMed:23524970). Mediates the interaction between the desmosome and COP9 signalosome complex (CSN) protein complex (PubMed:28891468). As a result of this interaction, promotes keratinocyte differentiation via deneddylation of EGFR resulting in a reduction in EGFR protein stabilization and translocation away from the cell membrane (PubMed:28891468). Critical for epidermal integrity and barrier function of the skin (By similarity). May mediate the inflammatory response in the epidermis (By similarity). Required for esophageal epithelial barrier integrity and correct intercellular spacing in differentiated esophageal epithelium (PubMed:24220297). Required for recovery of epidermal architecture and correct expression of differentiation markers following UVB exposure (PubMed:24594668). May also be required for OCLN involvement in tight junctions (By similarity).
Cellular Location	Cell membrane; Single-pass type I membrane protein {ECO:0000250|UniProtKB:Q7TSF1}. Cell junction, desmosome. Cytoplasm. Nucleus
Tissue Location	Expressed in all suprabasal layers of the epidermis, with the highest expression seen in the granular layer (at protein level) (PubMed:34905516). Expressed in the suprabasal esophageal epithelium (at protein level) (PubMed:24220297)

Background

Recognizes a protein of ~150kDa, identified as Desmoglein-1 (DSG1). Desmoglein-1 is a member of the desmosomal cadherin family. Desmosomes are intercellular adhering junctions that represent cell surface attachment sites for intermediate filament. Desmocollins and desmogleins are the main desmosomal transmembrane proteins. Desmogleins consist of Dsg1, Dsg2, Dsg3, and Dsg4 isoforms. Within the desmosome, the extracellular domain of desmoglein is essential for calcium dependent heterophilic binding to the desmocollins, whereas the intracellular domain is essential for binding to the desmosomal plaque protein, plakoglobin. Desmoglein 1 is synthesized exclusively in the suprabasal layers. Intact and functionally active desmoglein 1 is essential to epidermal integrity.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.