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DSG1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14430c

Product Information

Application	WB, IHC-P, E
Primary Accession	Q02413
Other Accession	NP_001933.2
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB34419
Calculated MW	113748
Antigen Region	471-499

Additional Information

Gene ID	1828
Other Names	Desmoglein-1, Cadherin family member 4, Desmosomal glycoprotein 1, DG1, DGI, Pemphigus foliaceus antigen, DSG1, CDHF4
Target/Specificity	This DSG1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 471-499 amino acids from the Central region of human DSG1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	DSG1 Antibody (Center) 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

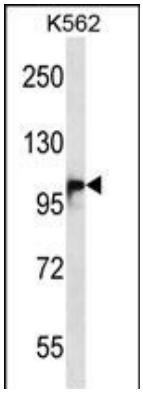
Desmosomes are cell-cell junctions between epithelial, myocardial and certain other cell types. Desmoglein 1 is a calcium-binding transmembrane glycoprotein component of desmosomes in vertebrate epithelial cells. Currently, three desmoglein subfamily members have been identified and all are members of the cadherin cell adhesion molecule superfamily. These desmoglein gene family members are located in a cluster on chromosome 18. The protein encoded by this gene has been identified as the autoantigen of the autoimmune skin blistering disease pemphigus foliaceus.

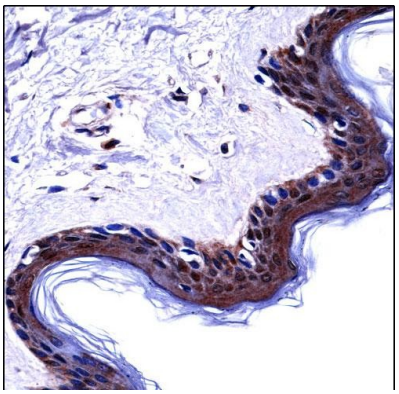
References

Rothenberg, M.E., et al. Nat. Genet. 42(4):289-291(2010)
Naoe, Y., et al. J. Dermatol. Sci. 57(3):192-198(2010)
Qian, Y., et al. J. Invest. Dermatol. 129(12):2823-2834(2009)
Spindler, V., et al. J. Biol. Chem. 284(44):30556-30564(2009)
Getsios, S., et al. J. Cell Biol. 185(7):1243-1258(2009)

Images

DSG1 Antibody (Center) (Cat. #AP14430c) western blot analysis in K562 cell line lysates (35ug/lane).This demonstrates the DSG1 antibody detected the DSG1 protein (arrow).





DSG1 Antibody (Center) (AP14430c)immunohistochemistry analysis in formalin fixed and paraffin embedded human skin tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of DSG1 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.

Citations

- The interaction between Staphylococcus aureus SdrD and desmoglein 1 is important for adhesion to host cells.

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