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Anti-Desmoglein 2 Antibody
Catalog # ABO10877

Specification

Anti-Desmoglein 2 Antibody - Product Information

Application	**WB, IHC-P**
Primary Accession	Q14126
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Desmoglein-2(DSG2) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-Desmoglein 2 Antibody - Additional Information

Gene ID 1829

Other Names
Desmoglein-2, Cadherin family member 5, HDGC, DSG2, CDHF5

Calculated MW
122294 MW KDa

Application Details
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Rat, Mouse, By Heat
Western blot, 0.1-0.5 µg/ml, Human, Rat, Mouse

Subcellular Localization
Cell membrane; Single-pass type I membrane protein. Cell junction, desmosome.

Tissue Specificity
All of the tissues tested and carcinomas.

Protein Name
Desmoglein-2

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence at the C-terminus of human Desmoglein 2(1104-1118aa STRVTKHSTVQHSYS), different from the related mouse and rat sequences by one amino acid.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage

At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Sequence Similarities
Contains 4 cadherin domains.

Anti-Desmoglein 2 Antibody - Protein Information

Name DSG2

Synonyms CDHF5

Function
A component of desmosome cell-cell junctions which are required for positive regulation of cellular adhesion (PubMed:17559062, PubMed:38395410). Involved in the interaction of plaque proteins and intermediate filaments mediating cell-cell adhesion. Required for proliferation and viability of embryonic stem cells in the blastocyst, thereby crucial for progression of post-implantation embryonic development (By similarity). Maintains pluripotency by regulating epithelial to mesenchymal transition/mesenchymal to epithelial transition (EMT/MET) via interacting with and sequestering CTNNB1 to sites of cell-cell contact, thereby reducing translocation of CTNNB1 to the nucleus and subsequent transcription of CTNNB1/TCF-target genes (PubMed:29910125). Promotes pluripotency and the multi-lineage differentiation potential of hematopoietic stem cells (PubMed:27338829). Plays a role in endothelial cell sprouting and elongation via mediating the junctional-association of cortical actin fibers and CDH5 (PubMed:27338829). Promotes cardiomyocyte cell homeostasis and desmosome junction formation at intercalated disks, as a result plays a role in the maintenance of cardiac conduction and heart chamber integrity (By similarity). Positively regulates pancreatic islet development and maintenance of endothelial cell barrier integrity in the pancreas, therefore involved in the controlled release of insulin from islet cells into the circulation in response to glucose (By similarity). Plays a role in limiting inflammatory infiltration and the apoptotic response to injury in kidney tubular epithelial cells, potentially via its role in maintaining cell-cell adhesion and the epithelial barrier (PubMed:38395410). Acts as a positive modulator of CSK and EGFR activation via sequestering them away from lipid rafts, this is independent of its role in desmosome cell junctions (PubMed:26918609). Also disrupts the localization of CAV1 to lipid rafts resulting in its distribution throughout the cytoplasm (PubMed:26918609).

Cellular Location
Cell membrane; Single-pass type I membrane protein. Cell junction, desmosome. Cytoplasm. Note=Localized to intercalated disks in the heart (PubMed:31845994). Localizes to the cytoplasm following cleavage by CASP3 in response to apoptosis (PubMed:17559062) Glycosylation promotes

localization to the plasma membrane (PubMed:30885746).

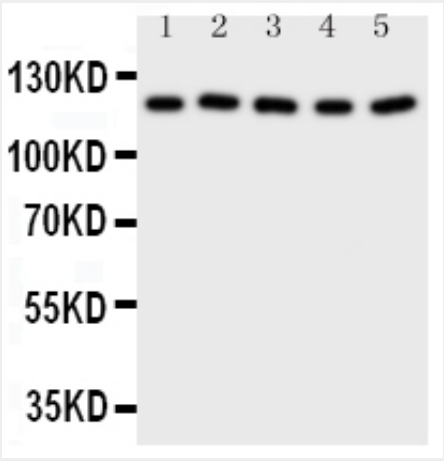
Tissue Location
Expressed in undifferentiated pluripotent stem cells, expression decreases during differentiation (at protein level) (PubMed:29910125). Expressed in hematopoietic stem cells and circulating endothelial progenitor cells, expression decreases upon increasing cell lineage commitment (at protein level) (PubMed:27338829). Expressed on common myeloid progenitors, pro- myelocytes, pro-erythrocytes and B-cell linage progenitors (at protein level). Expression in mature cell types in the bone marrow and mature leukocyte populations is absent (PubMed:27338829). Expressed by foreskin fibroblasts, expression peaks during the early stage of differentiation reprogramming (at protein level) (PubMed:29910125) Expressed by endothelial cells in both arterioles and venules in the cervix (at protein level) (PubMed:27338829). Expressed in pancreatic alpha-cells, beta-cells and exocrine tissue (at protein level) (PubMed:36309486). Expressed in cardiomyocytes (at protein level) (PubMed:31845994, PubMed:38375917). Expressed in kidney tubular epithelial cells (PubMed:38395410).

Anti-Desmoglein 2 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Desmoglein 2 Antibody - Images



Anti-Desmoglein 2 antibody, ABO10877, Western blottingAll lanes: Anti Desmoglein 2 (ABO10877) at 0.5ug/mlLane 1: HT1080 Whole Cell Lysate at 40ugLane 2: HELA Whole Cell Lysate at 40ugLane 3: SW620 Whole Cell Lysate at 40ugLane 4: SCG Whole Cell Lysate at 40ugLane 5: COLO320 Whole Cell Lysate at 40ugPredicted bind size: 122KDObserved bind size: 122KD

Anti-Desmoglein 2 Antibody - Background

Desmoglein-2 is a protein that in humans is encoded by the DSG2 gene. These desmoglein gene family members are located in a cluster on chromosome 18. This second family member is

expressed in colon, colon carcinoma, and other simple and stratified epithelial-derived cell lines. Mutations in DSG2 display a high degree of penetrance. Disease expression was of variable severity with LV involvement a prominent feature. The low prevalence of classical ECG changes highlights the need to expand current diagnostic criteria to take account of LV disease, childhood disease expression, and incomplete penetrance.