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KD-Validated Anti-Desmoglein 2 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1508

Product Information

Application	WB, FC
Primary Accession	Q14126
Reactivity	Human
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	23GB5215
Calculated MW	122294
Gene Name	DSG2
Aliases	DSG2; Desmoglein 2; CDHF5; Cadherin Family Member 5; Desmoglein-2; HDGC
Immunogen	A synthesized peptide derived from human Desmoglein 2

Additional Information

Gene ID	1829
Other Names	Desmoglein-2, Cadherin family member 5, HDGC, DSG2, CDHF5

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). Expressed in the esophageal mucosa (PubMed:24220297).

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