

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Desmocollin-2 in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 5% cross-reactivity with recombinant human (rh) Desmocollin-1 and rhDesmocollin-3 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Desmocollin-2 Arg136-Arg684 Accession # Q02487
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human Desmocollin-2 (Catalog # 4688-DC)
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human Desmocollin-2 (Catalog # 4688-DC), see our available Western blot detection antibodies

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Desmocollin-2 (DSC2) is a 100-110 kDa transmembrane glycoprotein member of the cadherin family of calcium dependent adhesion molecules (1 - 3). Human DSC2 is synthesized as a 901 amino acid (aa) precursor. It contains a 108 aa propeptide plus a mature region that consists of a 559 aa extracellular domain (ECD) that contains five cadherin-like domains, a 21 aa transmembrane segment, and a 186 aa cytoplasmic region (4). Within the ECD, human DSC2 shares 74% - 79% aa sequence identity with bovine, mouse, and rat DSC2. It shares 54% and 64% aa sequence identity with Desmocollin-1 and -3, respectively. DSC2 is also expressed as long and short splice forms which differ in their cytoplasmic regions (4, 5). The N-terminal two cadherin-like domains mediate homophilic interactions as well as heterophilic interactions with Desmoglein-2 (6). DSC2 is one of the principal components of desmosomes which form adhesive contacts between epithelial cells (1, 2). It is expressed in the basal and suprabasal layers of stratified epithelia in many tissues (1, 5, 7). In contrast to DSC1 and DSC3, DSC2 is also expressed in simple epithelia lining the gastrointestinal tract, liver, and kidney (5). During colon carcinogenesis however, DSC2 is downregulated, while DSC1 and DSC3 are upregulated (8). DSC2 is additionally expressed in the myocardium, and a variety of DSC2 mutations are associated with the cardiac arrhythmia disorder ARVC (5, 9).

References:

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