

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived		
	Mouse Desmoglein-2 (Leu29-Ala618) Accession # O55111	IEGRMDP	Mouse IgG _{2A} (Gln98-Lys330)
	N-terminus		C-terminus
N-terminal Sequence Analysis	Leu29 & Ala55		
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	92.9 kDa (monomer)		

SPECIFICATIONS

SDS-PAGE	100-120 kDa, reducing conditions
Activity	Measured by the ability of the immobilized protein to support the adhesion of BUD-8 human fibroblast cells. When 3 x 10 ⁴ cells are added to Recombinant Mouse Desmoglein-2 Fc Chimera coated plates (10 µg/mL, 100 µL/well), approximately 30%-60% will adhere after 1 hour at 37 °C. Optimal dilutions should be determined by each laboratory for each application.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 400 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
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. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Desmoglein-2 (DSG2) is a 160 kDa transmembrane glycoprotein in the cadherin family of calcium dependent adhesion molecules. It is a major protein component of desmosomal contacts between epithelial cells (1, 2). Mature mouse Desmoglein-2 consists of a 564 amino acid (aa) extracellular domain (ECD) with four cadherin domains, a 21 aa transmembrane segment, and a 483 aa cytoplasmic domain with six desmoglein repeats (3, 4). Within the ECD, mouse Desmoglein-2 shares 81% and 93% aa sequence identity with human and rat Desmoglein-2, respectively. A 60 kDa ECD fragment can be proteolytically shed, and this is enhanced by EGF R activation (5-7). The cytoplasmic domain is cleaved during apoptosis, leaving the transmembrane segment and ECD as a cell-associated fragment (8). Desmoglein-2 is widely expressed in epithelia and is required for maintenance of the epithelial barrier (1, 2, 9). It can be either up- or down-regulated in a variety of carcinomas during tumor progression (10). Desmoglein-2 also functions as a cell adhesion receptor for several adenovirus serotypes (11). This binding disrupts intercellular junctions between epithelial cells and promotes epithelial-mesenchymal transition (EMT) (11). Mutations in Desmoglein-2 cause cardiac dysfunction typical of arrhythmogenic right ventricular cardiomyopathy (ARVC) (12).

References:

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