Data Sheet (Cat.No.TMPY-03370)

TargetMol

Desmocollin 2/DSC2 Protein, Rat, Recombinant (His)

General Information

Synonyms:	desmocollin 2
Protein Construction:	A DNA sequence encoding the rat DSC2 (Q3T1K6) (Met1-Pro694) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Cys 29
Species:	Rat
Expression Host:	HEK293 Cells
Accession:	Q3T1K6
Molecular Weight:	76.1 kDa (predicted); 76 and 91 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

DSC2 is a calcium-dependent glycoprotein that is a member of the desmocollin subfamily of the cadherin superfamily. Like other desmocollins, murine DSC2 has two products, Dsc2a and Dsc2b, produced by alternative splicing of a 46 bp exon which encodes 11 COOH-terminal aa followed by an in-frame stop codon. These desmosomal family members, along with the desmogleins, are found primarily in epithelial cells where they constitute the adhesive proteins of the desmosome cell-cell junction and are required for cell adhesion and

desmosome formation. The desmosomal family members are arranged in two clusters on chromosome 18, occupying less than 650 kb combined. Mutations in DSC2 are associated with arrhythmogenic right ventricular dysplasia-11. DSC2 is Involved in the interaction of plaque proteins and intermediate filaments mediating cell-cell adhesion. DSC2 may contribute to epidermal cell positioning by mediating differential adhesiveness between cells that express different isoforms.

Reference

Nuber UA,et al.(1995) The widespread human desmocollin Dsc2 and tissue-specific patterns of synthesis of various desmocollin subtypes. Eur J Cell Biol. 66 (1): 69-74.

Marsden MD,et al.(1997) Cloning and transcriptional analysis of the promoter of the human type 2 desmocollin gene (DSC2). Gene. 186 (2): 237-47.

Greenwood MD,et al.(1997) Exon-intron organization of the human type 2 desmocollin gene (DSC2): desmocollin gene structure is closer to "classical" cadherins than to desmogleins. Genomics. 44 (3): 330-5.

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