



LD Biopharma, Inc.
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San Diego, CA 92121
Tel: 858-876-8266
<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human DSC2 Protein
Catalog Number: hRP-1126
Manufacturer: LD Biopharma, Inc.

Introduction

The protein encoded by Desmocollin-2 (DSC2) gene is a calcium-dependent glycoprotein that is a member of the desmocollin subfamily of the cadherin superfamily. 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 this gene are associated with arrhythmic right ventricular dysplasia-11.

Full-length mature protein of human DSC2 cDNA (136 - 694aa, derived from BC063291) was constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal. This protein is expressed in E.coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol:	DSC2 (ARVD11; CDHF2; DG2; DGII/III; DSC3)
Accession Number:	NP_077740
Species:	Human
Size:	50 µg / Vial
Composition:	1.0 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, arginine, DTT and Glycerol.
Storage:	In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

Knosel, T., et al., *Loss of desmocollin 1-3 and homeobox genes PITX1 and CDX2 are associated with tumor progression and survival in colorectal carcinoma.* Int J Colorectal Dis 27



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(11), 1391-1399 (2012)

Nekrasova, O.E., et al., *Desmosomal cadherins utilize distinct kinesins for assembly into desmosomes*. J. Cell Biol. 195 (7), 1185-1203 (2011)

Hayashi, T., et al., *Desmocollin 2 is a new immunohistochemical marker indicative of squamous differentiation in urothelial carcinoma*. Histopathology 59 (4), 710-721 (2011)

Applications

1. May be used for in vitro DSC2 mediated epithelial cells differentiation regulation study with this protein as either coating matrix protein or as soluble factor.
2. May be used for DSC2 protein – protein interaction assay.
3. May be used as enzymatic substrate for various proteases.
4. Potential biomarker protein for cancer diagnosis.
5. May be used for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHGNLYFQGGEFRWAPIPCSMLENSLGPFPLFLQQVQSDTAQNYTIY
YSIRGPGVDQEPRNLFYVERDTGNLYCTRVPVDREQYESFEIIAFATTPDGYTPELPLPLIIKIE
DENDNYPIFTETTYTFTIFENCRVGTTVGQVCATDKDEPDTMHTRLKYSIIIGQVPPSPTLFSMH
PTTGVIITTTSSQLDRELIDKYQLKIKVQDMDGQYFGLQTTSTCIINIDDVNDHLPTFTRTSYVT
SVEENTVDVEILRVTVEDKDLVNTANWRANYTILKGNENGNFKIVTDAKTNEGVLCVVKPLNYE
EKQQMILQIGVVNEAPFSREASPRSAMSTATVTVNVEDQDEGPECNPPIQTVRMKENAEVGTTS
NGYKAYDPETRSSSGIRYKKLTDPTGWVTIDENTGSIKVFRSLDREAETIKNGIYNITVLASDQ
GGRTCTGTGLGIILQDVNDNSPFIPKKTVIICKPTMSSAEIVAVDPDEPIHGPPFDIFSLESSTSE
VQRMWRLKAINDTAARLSYQNDPPFGSYVVPITVRDLGMSSVTSLDVTLCDCTENDCTHRVD
PRIGGGGVQLGK