

BM370**Monoclonal Antibody to Desmoglein 1 + 2 - Purified****Alternate names:**

CDHF4, CDHF5, DG1, DGI, DSG-1, DSG-2, DSG1, DSG2, Desmoglein1, Desmoglein2, Desmosomal glycoprotein 1, HDGC, Pemphigus foliaceus antigen

Quantity:

50 µg

Background:

Desmosomes are cell-cell junctions between epithelial, myocardial and certain other cell types. Desmoglein 1 and 2 are calcium-binding transmembrane glycoprotein component of desmosomes in vertebrate epithelial cells. Currently, three desmoglein subfamily members have been identified and all are members of the cadherin cell adhesion molecule superfamily. These desmoglein gene family members are located in a cluster on chromosome 18.

Uniprot ID:

[Q14126](#)

NCBI:

[NP_001934](#)

GeneID:

[1829](#)

Host / Isotype:

Mouse / IgG1

Recommended Isotype Controls:

SM10P (for use in human samples), SM20P (for use in rat samples), AM03095PU-N

Clone:

DG3.10

Immunogen:

"Band 3" polypeptide of isolated desmosomes from Bovine muzzle epidermis

Format:

State: Lyophilized purified Ig fraction

Purification: Affinity Chromatography on Protein A

Buffer System: Final Solution contains PBS, pH 7.4 with 0.09% Sodium Azide as preservative and 0.5% BSA as stabilizer

Reconstitution: Restore with 1.0 ml distilled water.

Applications:

Western blotting.

Immunofluorescence Microscopy.

Immunohistochemistry on Frozen Sections.

Immunohistochemistry on Paraffin Embedded Tissue (after microwave treatment).

Working Dilution: Dilute at least 1/10 with PBS, pH 7.4, for Immunohistochemical application.

Incubation time: 1 h at RT, extended with paraffin.

Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:

This antibody recognizes Desmoglein 1+2 (desmosome-specific cadherins) in desmosome-bearing cells. It **does not** react with cells containing plaque-bearing junctions of non-desmosomal type.

Tumors Specifically Detected: All epithelium-derived tumors, notably carcinomas, and meningiomas.

Polypeptide Reacting: Mr 165000 Desmoglein, "band 3" polypeptide of the desmosomal complex.

Epitope Recognized: Localized at the repeating unit domain ("RUD") of the

cytoplasmic C-terminal part of the polypeptide.

Tested Reactivities on Cultured Cell Lines: A-431, MCF-7, TR-146, PLC and various other Human epithelial cell lines; Bovine BMGE+H, BMGE-H, MDBK.

Species Reactivity:

Tested: Human, Bovine, Rat and Mouse.

Storage:

Prior to reconstitution store at 2-8°C.

Following reconstitution store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.

Avoid repeated freezing and thawing.

Shelf life: one year from despatch.

General Readings:

1. Koch PJ, Walsh MJ, Schmelz M, Goldschmidt MD, Zimbelmann R, Franke WW. Identification of desmoglein, a constitutive desmosomal glycoprotein, as a member of the cadherin family of cell adhesion molecules. *Eur J Cell Biol.* 1990 Oct;53(1):1-12. PubMed PMID: 1706270.
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3. Wheeler GN, Parker AE, Thomas CL, Ataliotis P, Poynter D, Arnemann J, et al. Desmosomal glycoprotein DGI, a component of intercellular desmosome junctions, is related to the cadherin family of cell adhesion molecules. *Proc Natl Acad Sci U S A.* 1991 Jun 1;88(11):4796-800. PubMed PMID: 1711210.
4. Schmelz M, Franke WW. Complexus adhaerentes, a new group of desmoplakin-containing junctions in endothelial cells: the syndesmos connecting retothelial cells of lymph nodes. *Eur J Cell Biol.* 1993 Aug;61(2):274-89. PubMed PMID: 8223718.
5. Schäfer S, Koch PJ, Franke WW. Identification of the ubiquitous human desmoglein, Dsg2, and the expression catalogue of the desmoglein subfamily of desmosomal cadherins. *Exp Cell Res.* 1994 Apr;211(2):391-9. PubMed PMID: 8143788.
6. Schäfer S, Stumpp S, Franke WW. Immunological identification and characterization of the desmosomal cadherin Dsg2 in coupled and uncoupled epithelial cells and in human tissues. *Differentiation.* 1996 May;60(2):99-108. PubMed PMID: 8641550.
7. Hatzfeld M, Haffner C, Schulze K, Vinzens U. The function of plakophilin 1 in desmosome assembly and actin filament organization. *J Cell Biol.* 2000 Apr 3;149(1):209-22. PubMed PMID: 10747098.
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9. Akat K, Mennel HD, Kremer P, Gassler N, Bleck CK, Kartenbeck J. Molecular characterization of desmosomes in meningiomas and arachnoidal tissue. *Acta Neuropathol.* 2003 Oct;106(4):337-47. Epub 2003 Jul 5. PubMed PMID: 12845453.
10. Kartenbeck J, Haselmann U, Gassler N. Synthesis of junctional proteins in metastasizing colon cancer cells. *Eur J Cell Biol.* 2005 Mar;84(2-3):417-30. PubMed PMID: 15819418.
11. Bosch FX, Andl C, Abel U, Kartenbeck J. E-cadherin is a selective and strongly dominant prognostic factor in squamous cell carcinoma: a comparison of E-cadherin

with desmosomal components. Int J Cancer. 2005 May 1;114(5):779-90. PubMed PMID: 15609307.