

## Desmoglein-2 Monoclonal Mouse Antibody (6D8)

### Product Description

This antibody recognizes a protein of 165 kDa, identified as Desmoglein-2 (DSG2). This monoclonal antibody recognizes the extracellular domain of human desmoglein-2. Desmoglein-2 is a member of the desmosomal cadherin family. Desmosomes are intercellular adhering junctions that represent cell surface attachment sites for intermediate filament. Desmocollins and desmogleins are the main desmosomal transmembrane proteins. Desmogleins consist of Dsg1, Dsg2, Dsg3, and Dsg4 isoforms. Within the desmosome, the extracellular domain of desmoglein is essential for calcium dependent heterophilic binding to the desmocollins, whereas the intracellular domain is essential for binding to the desmosomal plaque protein, plakoglobin. Human Desmoglein-2 is a type I transmembrane glycoprotein of 1117 amino acid (aa) residues with a 23 aa signal peptide and a 25 aa propeptide. It differs from other classic cadherins by having four instead of five cadherin repeat domains in its extracellular region, and a much larger cytoplasmic region containing five desmoglein repeat domains which share homology with the cadherin repeats. Instead of having the HAV adhesion motif found in type I cadherins, desmogleins have R/YAL as the adhesion motif on its amino-terminal cadherin repeat. The cytoplasmic tails of desmogleins interact with desmoplakins, plakoglobin and plakophilins. In turn, these proteins link the desmogleins with the intermediate filaments. Desmoglein-2 has been shown to be important in establishing cell-cell adhesion and function in epithelial cells. Desmoglein2 was originally identified in colon carcinoma and colon, and was named HDGC (human desmoglein colon).

Primary antibodies are available purified, or with a selection of fluorescent CF® dyes and other labels. CF® dyes offer exceptional brightness and photostability. See the [CF® Dye Brochure](#) for more information. Note: Conjugates of blue fluorescent dyes like CF®405S and CF®405M are not recommended for detecting low abundance targets, because blue dyes have lower fluorescence and can give higher non-specific background than other dye colors.

**Stock status:** Because Biotium offers a large number of antibody and conjugation options, primary antibody conjugates may be made to order. Typical lead times are up to one week for CF® dye and biotin conjugates, and up to 2-3 weeks for fluorescent protein and enzyme conjugates. Please email [order@biotium.com](mailto:order@biotium.com) to inquire about stock status and lead times before placing your order.

**Catalog number key for antibody number 1437, Anti-Desmoglein-2 (6D8)**

### Product attributes

<b>Antibody number</b>	#1437
<b>Antibody reactivity (target)</b>	Desmoglein-2
<b>Antibody type</b>	Primary
<b>Host species</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Clone</b>	6D8
<b>Isotype</b>	IgG1, kappa
<b>Molecular weight</b>	~165 kDa
<b>Synonyms</b>	ARVC10; ARVD10; Cadherin family member 5; CDHF5; CMD1BB; Desmoglein-2; DSG2; HDGC; Human Desmoglein Colon
<b>Human gene symbol</b>	DSG2
<b>Entrez gene ID</b>	1829
<b>SwissProt</b>	Q14126
<b>Unigene</b>	412597
<b>Immunogen</b>	Recombinant human full-length DSG2 protein
<b>Antibody target cellular localization</b>	Plasma membrane
<b>Expected antibody applications</b>	Immunofluorescence (published for clone), ELISA (published for clone), Flow, surface (published for clone), IHC (FFPE) (published for clone), IP (published for clone), WB (published for clone)
<b>Species reactivity</b>	Human
<b>Antibody application notes</b>	Higher concentration may be required for direct detection using primary antibody conjugates than for indirect detection with secondary antibody, Immunofluorescence: 1-2 ug/mL, Flow Cytometry 0.5-1 ug/million cells/0.1 mL, Western blotting 0.5-1 ug/mL, Optimal dilution for a specific application should be determined by user
<b>Positive control</b>	A431, HepG2 or K562 cells. Heart or Colon
<b>Shipping condition</b>	Room temperature
<b>Storage Conditions</b>	Store at 2 to 8 °C, Protect fluorescent conjugates from light, Note: store BSA-free antibodies at -10 to -35 °C
<b>Shelf life</b>	Guaranteed for at least 24 months from date of receipt when stored as recommended
<b>Regulatory status</b>	For research use only (RUO)
<b>Antibody/conjugate formulation</b>	Conjugates: 0.1 mg/mL in PBS/0.1% BSA/0.05% azide, HRP conjugates: 0.1 mg/mL in PBS/0.05% BSA, Purified: 0.2 mg/mL in PBS/0.05% BSA/0.05% azide, Purified, BSA-free: 1 mg/mL in PBS without azide
<b>Antibody research areas</b>	Cancer, Cell adhesion
<b>Product origin</b>	Product may contain either bovine serum albumin (BSA) from bovine serum (Bos taurus), or recombinant BSA produced in Chinese hamster ovary cells. Inquire for the specific lot.
<b>Cell/tissue expression</b>	Epithelial cells
<b>Tumor expression</b>	Colorectal cancer

Antibody # prefix	Conjugation	Ex/Em (nm)	Laser line	Detection channel	Dye Features
BNC04	CF@405S	404/431	405	DAPI (microscopy), AF405	<a href="#">CF@405S Features</a>
BNC88	CF@488A	490/515	488	GFP, FITC	<a href="#">CF@488A Features</a>
BNC68	CF@568	562/583	532, 561	RFP, TRITC	<a href="#">CF@568 Features</a>
BNC94	CF@594	593/614	561	Texas Red®	<a href="#">CF@594 Features</a>
BNC40	CF@640R	642/662	633-640	Cy@5	<a href="#">CF@640R Features</a>
BNC47	CF@647	650/665	633-640	Cy@5	<a href="#">CF@647 Features</a>
BNC74	CF@740	742/767	633-685	775/50	<a href="#">CF@740 Features</a>
BNCB	Biotin	N/A	N/A	N/A	
BNUB	Purified	N/A	N/A	N/A	
BNUM	Purified, BSA-free	N/A	N/A	N/A	

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## References

Note: References for this clone sold by other suppliers may be listed for expected applications.

1. J Cell Sci (2000) 113: 1737-1745. (WB)
2. Mol Biol Cell (2007) 18(11): 4201-4689. (IF; IP; WB)
3. Mol Genet Metab (2008) 95(1-2): 74-80. (IHC, FFPE)
4. Cancer Biol Therapy (2020) 21(12): 1154-1162. (ELISA)
5. Oncotarget (2016) 7(29): 46492-46508. (Flow)

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Product link: <https://biotium.com/product/mouse-monoclonal-anti-desmoglein-2-6d8/>

