

# dsg1 (27B2): sc-59904

## BACKGROUND

Desmogleins (dsgs) are type I membrane proteins that are important for cell adhesion and are expressed in great abundance at the desmosomes, which are adhesive cell junctions. The dsg proteins belong to the cadherin family and consist of dsg1, dsg2 and dsg3. Calcium binds to the putative calcium binding sites at the extracellular N-terminal domain of dsg1, which has cadherin-like repeats. Unlike normal human keratinocytes, the squamous cell carcinoma cells exhibit diminished or unusual expression of dsg3 and dsg1, which bear pemphigus vulgaris and pemphigus foliaceus antigens, respectively. Cultured normal human keratinocytes express dsg1 and dsg3 mRNA, with or without dsg2 mRNA, which indicates that desmoglein isoforms exhibit abnormal expression and may be related to tumor cell kinetics, such as cell invasion and metastasis. Pemphigus is an autoimmune disease of skin adhesion associated with auto-antibodies against a number of keratinocyte antigens, such as the adhesion molecules dsg1 and 3 and acetylcholine receptors.

## CHROMOSOMAL LOCATION

Genetic locus: DSG1 (human) mapping to 18q12.1.

## SOURCE

dsg1 (27B2) is a mouse monoclonal antibody raised against cytoplasmic epitope of dsg1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

dsg1 (27B2) is available conjugated to agarose (sc-59904 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-59904 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-59904 PE), fluorescein (sc-59904 FITC), Alexa Fluor® 488 (sc-59904 AF488), Alexa Fluor® 546 (sc-59904 AF546), Alexa Fluor® 594 (sc-59904 AF594) or Alexa Fluor® 647 (sc-59904 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-59904 AF680) or Alexa Fluor® 790 (sc-59904 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

dsg1 (27B2) is recommended for detection of dsg1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500); non cross-reactive with desmoglein 2 or desmoglein 3.

Suitable for use as control antibody for dsg1 siRNA (h): sc-35224, dsg1 shRNA Plasmid (h): sc-35224-SH and dsg1 shRNA (h) Lentiviral Particles: sc-35224-V.

Molecular Weight of dsg1 precursor: 150 kDa.

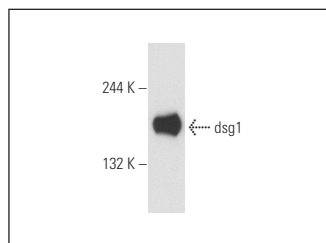
Molecular Weight of mature dsg1: 160 kDa.

Positive Controls: A-375 cell lysate: sc-3811.

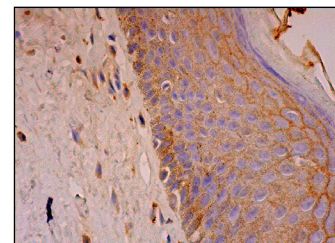
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



dsg1 (27B2): sc-59904. Western blot analysis of human recombinant dsg1 under non-reducing conditions.



dsg1 (27B2): sc-59904. Immunoperoxidase staining of formalin fixed, paraffin-embedded human vulva/anal skin tissue showing membrane and cytoplasmic staining of epidermal cells.

## SELECT PRODUCT CITATIONS

- Hamanaka, R.B., et al. 2013. Mitochondrial reactive oxygen species promote epidermal differentiation and hair follicle development. *Sci. Signal.* 6: ra8.
- Katiyar, P., et al. 2022. Decreased FABP5 and dsg1 protein expression following PAX6 knockdown of differentiated human limbal epithelial cells. *Exp. Eye Res.* 215: 108904.
- Yang, T., et al. 2022. FAM167A is a key molecule to induce Bcr-Abl-independent TKI resistance in CML via noncanonical NFκB signaling activation. *J. Exp. Clin. Cancer Res.* 41: 82.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

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