

dsg3 (3G133): sc-59776

BACKGROUND

Pemphigus is an autoimmune disease of skin adhesion associated with auto-antibodies against a number of keratinocyte antigens, such as the adhesion molecules desmoglein (dsg) 1 and 3 and acetylcholine receptors. Desmogleins, type I membrane proteins, are important for cell adhesion and are expressed in great abundance at the desmosomes, which are adhesive cell junctions. Desmogleins 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, 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. Several carcinoma cell lines constantly express dsg2 and dsg3 mRNA, whereas cultured normal human keratinocytes always express dsg1 and dsg3 mRNA, with or without dsg2 mRNA. This expression pattern indicates that desmoglein isoforms exhibit abnormal expression and may be related to tumor cell kinetics, such as cell invasion and metastasis. dsg2 is the fundamental dsg common to all desmosome-possessing tissues and is the largest desmoglein in the family.

CHROMOSOMAL LOCATION

Genetic locus: DSG3 (human) mapping to 18q12.1.

SOURCE

dsg3 (3G133) is a mouse monoclonal antibody raised against a recombinant fragment of the extracellular domain of dsg3 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

dsg3 (3G133) is recommended for detection of desmoglein 3 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 1 or desmoglein 2.

Suitable for use as control antibody for dsg3 siRNA (h): sc-43115, dsg3 shRNA Plasmid (h): sc-43115-SH and dsg3 shRNA (h) Lentiviral Particles: sc-43115-V.

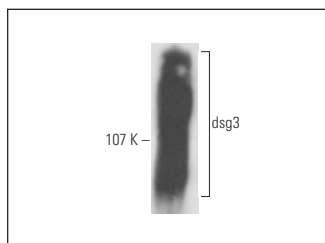
Molecular Weight of intact dsg3: 130 kDa.

Positive Controls: SCC-25 whole cell lysate, A-431 whole cell lysate: sc-2201 or SCC-4 whole cell lysate: sc-364363.

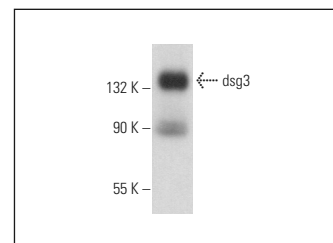
RECOMMENDED SUPPORT REAGENTS

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



dsg3 (3G133): sc-59776. Western blot analysis of dsg3 expression in SCC-25 whole cell lysate.



dsg3 (3G133): sc-59776. Western blot analysis of dsg3 expression in A-431 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Sakamoto, K., et al. 2012. Reduction of NOTCH1 expression pertains to maturation abnormalities of keratinocytes in squamous neoplasms. *Lab. Invest.* 92: 688-702.
2. Kyrodinou, M., et al. 2014. Desmoglein-3/γ-catenin and E-cadherin/β-catenin differential expression in oral leukoplakia and squamous cell carcinoma. *Clin. Oral Investig.* 18: 199-210.
3. Hoover, H., et al. 2015. Quantitative proteomic verification of membrane proteins as potential therapeutic targets located in the 11q13 amplicon in cancers. *J. Proteome Res.* 14: 3670-3679.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.