

# dsg2 (H-145): sc-20115

## 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: DSG2 (human) mapping to 18q12.1.

## SOURCE

dsg2 (H-145) is a rabbit polyclonal antibody raised against amino acids 816-960 of dsg2 (desmoglein 2) of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

dsg2 (H-145) is recommended for detection of desmoglein 2 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for dsg2 siRNA (h): sc-35226, dsg2 shRNA Plasmid (h): sc-35226-SH and dsg2 shRNA (h) Lentiviral Particles: sc-35226-V.

Molecular Weight of dsg2: 59-150 kDa.

Positive Controls: ECV304 cell lysate: sc-2269, T24 cell lysate: sc-2292 or A-431 whole cell lysate: sc-2201.

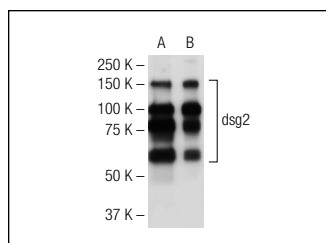
## STORAGE

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

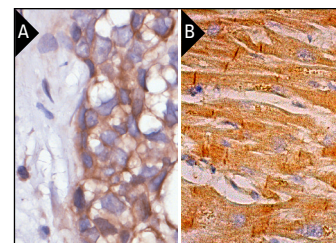
## RESEARCH USE

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

## DATA



dsg2 (H-145): sc-20115. Western blot analysis of dsg2 expression in ECV-304 (A) and T24 (B) whole cell lysates.



dsg2 (H-145): sc-20115. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast tumor showing membrane staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic and intercalated disks staining of myocytes (B).

## SELECT PRODUCT CITATIONS

1. Andreadis, D., et al. 2005. Immunohistochemical detection of the expression of the cell adhesion molecules E-cadherin, desmoglein-2,  $\beta$ 4-integrin, ICAM-1 and HCAM (CD44s) in Warthin's tumour of the parotid gland. *Oral Oncol.* 41: 799-805.
2. Kurrey, N.K., et al. 2005. Snail and SLUG are major determinants of ovarian cancer invasiveness at the transcription level. *Gynecol. Oncol.* 97: 155-165.
3. Li, B., et al. 2008. WRN controls formation of extrachromosomal telomeric circles and is required for TRF2 $\Delta$ B-mediated telomere shortening. *Mol. Cell. Biol.* 28: 1892-1904.
4. Xiao, X., et al. 2012. Intercellular adhesion molecule-1 is a regulator of blood-testis barrier function. *J. Cell Sci.* 125: 5677-5689.
5. Xiao, X., et al. 2013. Intercellular adhesion molecule-2 is involved in apical ectoplasmic specialization dynamics during spermatogenesis in the rat. *J. Endocrinol.* 216: 73-86.

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Try **dsg2 (AH12.2): sc-80663** or **dsg2 (6D8): sc-53486**, our highly recommended monoclonal alternatives to dsg2 (H-145). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **dsg2 (AH12.2): sc-80663**.