**BACKGROUND**

Pemphigus is an autoimmune disease of skin adhesion associated with autoantibodies 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 (5H10) is a mouse monoclonal antibody raised against an extracellular domain of dsg3 of human origin.

**PRODUCT**

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

dsg3 (5H10) is available conjugated to agarose (sc-23912 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-23912 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-23912 PE), fluorescein (sc-23912 FITC), Alexa Fluor® 488 (sc-23912 AF488), Alexa Fluor® 546 (sc-23912 AF546), Alexa Fluor® 594 (sc-23912 AF594) or Alexa Fluor® 647 (sc-23912 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-23912 AF680) or Alexa Fluor® 790 (sc-23912 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**APPLICATIONS**

dsg3 (5H10) 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); non cross-reactive with dsg1, dsg2 or mouse proteins.

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.

**STORAGE**

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

**DATA**

![dsg3 (5H10): sc-23912. Western blot analysis of dsg3 expression in SCC-25 whole cell lysate.](image1)

![dsg3 (5H10): sc-23912. Immunofluorescence staining of methanol-fixed SCC-4 cells showing membrane localization.](image2)

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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