

## Product Information

# Anti-Desmoglein 2 (DSG2) Antibody, Mouse Monoclonal

Clone AH12.2, Purified from Hybridoma Cell Culture

**SAB4200466**

## Product Description

Anti-Desmoglein 2 (DSG2) (mouse IgG1 isotype) is derived from the hybridoma AH12.2 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with lipid raft enriched preparations of human T84 intestinal epithelial cells.<sup>1</sup> The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents (Cat. No. ISO2). The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Anti-Desmoglein 2 recognizes human Desmogelin-2 (DSG2) and a truncated version of the protein (tDsg2) that lacks several domains at the C-terminus. The antibody recognizes an intracellular epitope of the protein.<sup>1</sup> The product may be used in several immunochemical techniques including immunoblotting (~ 150 kDa), immunoprecipitation, and immunocytochemistry.<sup>1</sup>

Desmogleins are a family of cadherin proteins that play an important role in the formation of desmosomes, cell- to-cell adhesions, often found in both simple and squamous epithelium. These adhesions are important for ensuring tissue integrity and regulation of paracellular movement of solutes, as well as restricting access of luminal pathogens to underlying tissue compartments.

There are four distinct desmoglein genes (DSG1-DSG4), each differentially expressed depending upon the type of tissue and the state of differentiation. A member of this family, desmoglein-2 (DSG2), is widely expressed in epithelial and non-epithelial tissues, such as the intestine, epidermis, testis, and heart.<sup>2</sup> DSG2 has been shown to regulate numerous cellular processes, including proliferation and apoptosis. Specifically, intracellular fragments of DSG2 promote apoptosis in colonic epithelial cells.<sup>3</sup>

Interestingly, mutations that likely prevent proteolytic removal of the proregion of desmoglein-2 have been identified in patients with Arrhythmogenic Right Ventricular Cardiomyopathy (ARVC).<sup>4</sup> DSG2 is also deregulated in various carcinomas while down-regulated in pancreatic tumors.<sup>5-6</sup>

## Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~ 1.0 mg/mL

## Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

## Storage/Stability

For extended storage, freeze at -20 °C in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

## Product Profile

### Immunoblotting:

A working concentration of 0.5–1.0 µg/mL is recommended using HeLa total cell extracts.

### Immunofluorescence:

A working concentration of 2.5–5.0 µg/mL is recommended using HeLa cells.

**Note:** In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.



## References

1. Nava, P. et al., Mol. Biol. Cell, **18**, 4565-4578 (2007).
2. Amagai, M., and Stanley, J.R., J. Invest. Dermatol., **132**, 776-784 (2012).
3. Kolegraff, K. et al., Cell Adh. Migr., **5**, 306-314 (2011).
4. Awad, M.N. et al., Am. J. Hum. Genet., **79**, 136-142 (2006).
5. Brennan, D., and Mahoney, M.G., Cell Adh. Migr., **3**, 148-154 (2009).
6. Ramani, V.C. et al., BMC Cancer, **17**, 373-383 (2008).

## Notice

We provide information and advice to our customers on application technologies and regulatory matters to the best of our knowledge and ability, but without obligation or liability. Existing laws and regulations are to be observed in all cases by our customers. This also applies in respect to any rights of third parties. Our information and advice do not relieve our customers of their own responsibility for checking the suitability of our products for the envisaged purpose.

The information in this document is subject to change without notice and should not be construed as a commitment by the manufacturing or selling entity, or an affiliate. We assume no responsibility for any errors that may appear in this document.

### Technical Assistance

Visit the tech service page at [SigmaAldrich.com/techservice](http://SigmaAldrich.com/techservice).

### Standard Warranty

The applicable warranty for the products listed in this publication may be found at [SigmaAldrich.com/terms](http://SigmaAldrich.com/terms).

### Contact Information

For the location of the office nearest you, go to [SigmaAldrich.com/offices](http://SigmaAldrich.com/offices).

The life science business of Merck operates as MilliporeSigma in the U.S. and Canada.

Merck and Sigma-Aldrich are trademarks of Merck KGaA, Darmstadt, Germany or its affiliates. All other trademarks are the property of their respective owners. Detailed information on trademarks is available via publicly accessible resources.

© 2021 Merck KGaA, Darmstadt, Germany and/or its affiliates. All Rights Reserved.  
Sab420046dat Rev 05/21

