**For Research Use Only.
Not for use in diagnostic procedures.**

MONOCLONAL ANTIBODY

# Anti-Desmoglein 3 (Mouse) mAb (No Azide)

| Code No. | Clone | Subclass | Quantity | Concentration |
|---|---|---|---|---|
| D218-3 | AK18 | Mouse IgG1 | 100 µL | 1 mg/mL |

**BACKGROUND:** Pemphigus vulgaris (PV) is a life-threatening autoimmune blistering disease of the skin and mucous membranes. In patients of PV, IgG autoantibodies against the cell surface of keratinocytes in stratified squamous epithelia play a major pathogenic role in loss of cell-cell adhesion. The autoimmune target of PV is desmoglein 3 (Dsg3) which is a member of the cadherin family of calcium-depending, transmembrane glycoprotein.

**SOURCE:** This antibody was purified from hybridoma (clone AK18) supernatant using protein A agarose. This hybridoma was established by fusion of splenocytes from PV model mouse and P3 mouse myeloma cells.

**FORMULATION:** 100 µg IgG in 100 µL volume of PBS, pH 7.2. No preservative is contained.

**STORAGE:** This antibody solution is stable for one year from the date of purchase when stored at 4°C.

**REACTIVITY:** This antibody reacts with human and mouse Dsg3.

**APPLICATIONS:**

Western blotting; Not tested
Immunoprecipitation; Clone AK18 is used in reference 6).
Immunohistochemistry; Mouse Dsg3: 0.1 µg/mL
Immunocytochemistry; Mouse Dsg3: 0.1 µg/mL

Detailed procedure is provided in the following **PROTOCOLS**.

**INTENDED USE:**

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**REFERENCES:**

1) Culton, D. A., *et al.*, *J. Invest. Dermatol.* **135**, 1590-1597 (2015) [WB, IHC]
2) Kamiya, K., *et al.*, *Br. J. Dermatol.* **167**, 252-261 (2012)
3) Sharma, P. M., *et al.*, *J. Invest. Dermatol.* **129**, 2309-2312 (2009)
4) Yamamoto, Y., *et al.*, *J. Biol. Chem.* **282**, 17866-17876 (2007)
5) Yamamoto, Y., *et al.*, *J. Dermatol. Sci.* **47**, 119-125 (2007)
6) Tsunoda, K., *et al.*, *J. Immunol.* **170**, 2170-2178 (2003)

Clone AK18 is used in this references.

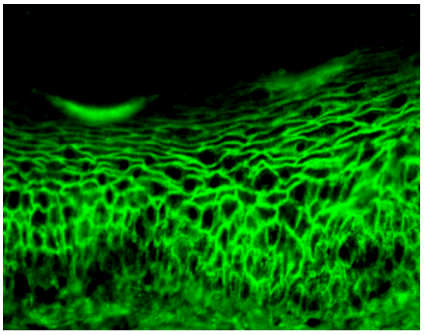
**SPECIES CROSS REACTIVITY:**

| Species | Human | Mouse | Rat |
|---|---|---|---|
| Tissues | Skin | Oral mucosa | Not tested |
| Reactivity on IHC | weak* | + | |

*Clone AK 18 has weak reactivity in human.

**RELATED PRODUCTS:**

D217-3 Anti-Desmoglein 3 (Mouse) mAb (AK9)
D219-3 Anti-Desmoglein 3 (Mouse) mAb (AK23)
W331-3 Anti-Desmoglein 2 (Human) mAb (2B2C1A)



***Immunohistochemical detection of Dsg3 on frozen section of mouse oral mucosa with D218-3.***
This data was kindly provided by Dr. Amagai, M.D. Ph.D. and Dr. Tsunoda Ph.D. (The Department of Dermatology, School of Medicine, Keio University, Tokyo)

**PROTOCOLS:**

**Immunohistochemical staining for frozen sections**

1) Cover tissues with the primary antibody diluted with dilution buffer (TBS containing 0.5 mM $CaCl_2$, 1% BSA) as suggest in the **APPLICATIONS**.
2) Incubate the sections for 1 hour at room temperature.
3) Wash the slides with washing buffer (TBS containing 0.5 mM $CaCl_2$) (5 minutes x 3 times).
4) Wipe gently around each section and cover tissues with FITC-conjugated anti-mouse IgG antibody diluted by dilution buffer.
5) Incubate the sections for 1 hour at room temperature.
6) Wash the slides with washing buffer (5 minutes x 3 times).
7) Now ready for mounting.

(Positive control for Immunohistochemistry; Mouse oral mucosa)

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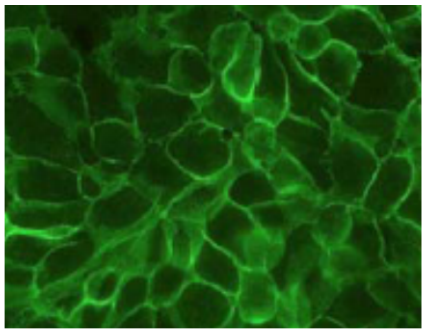

***Immunocytochemical detection of Dsg3 on living mouse keratinocyte cell line (PAM212 cells) with D218-3.***

This data was kindly provided by Dr. Amagai, M.D. Ph.D. and Dr. Tsunoda Ph.D. (The Department of Dermatology, School of Medicine, Keio University, Tokyo)

**Immunocytochemistry for living keratinocytes**

1) Prepare 80-90% confluent mouse keratinocytes in chamber slide.
2) Wash the cells 2 times with DMEM (FCS free).
3) Add the primary antibody diluted with medium as suggest in the **APPLICATIONS** onto the cells and incubate for 30 minutes on ice (Optimization of antibody concentration or incubation condition is recommended if necessary).
4) Aspirate medium by aspirator.
5) Wash the cells with PBS (5 minutes x 3 times).
6) Apply Methanol into each well.
7) Incubate for 20 minutes at -30°C.
8) Aspirate Methanol by aspirator.
9) Wash the cells with PBS (5 minutes x 3 times).
10) Add FITC-conjugated anti-mouse IgG antibody diluted with PBS for 30-60 minutes at room temperature. Keep out light by aluminum foil.
11) Wash the cells with PBS (5 minutes x 3 times).
12) Promptly add mounting medium onto the slide, then put a cover slip on it.

(Positive control for Immunocytochemistry; PAM212)