

DOG1/Anoctamin 1 (D1M9Q) Rabbit mAb

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Applications: W, IP, IF-IC	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 150	Source/Isotype: Rabbit IgG	UniProt ID: #Q5XXA6	Entrez-Gene Id: 55107
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Product Usage Information**Application**

Western Blotting
Immunoprecipitation
Immunofluorescence (Immunocytochemistry)

Dilution

1:1000
1:50
1:1600

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. *Do not aliquot the antibody.*

Specificity/Sensitivity

DOG1/Anoctamin 1 (D1M9Q) Rabbit mAb recognizes endogenous levels of total Anoctamin 1 protein. An unidentified band is detected around 30 kDa in some tissues.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala976 of human anoctamin 1 protein.

Background

Anoctamin 1 is a plasma membrane calcium-activated chloride channel, also known as discovered on gastrointestinal stromal tumors protein 1 (DOG1) or transmembrane protein 16A (TMEM16A) (1). It is essential for chloride secretion from epithelial tissues (2) and has been shown to be a specific marker for cells of Cajal (3), the pacemaker cells that control smooth muscle contraction. Anoctamin 1 knockout mice exhibit an altered gastric smooth muscle rhythmic contraction (4). More recently, research studies have identified anoctamin 1 as a heat sensor in nociceptive neurons (5). Heat above 44°C triggers anoctamin 1-dependent depolarization, contributing to the mediation of thermal nociception (5).

Background References

- Schroeder, B.C. et al. (2008) *Cell* 134, 1019-29.
- Thomas-Gatewood, C. et al. (2011) *Am J Physiol Heart Circ Physiol* 301, H1819-27.
- Gomez-Pinilla, P.J. et al. (2009) *Am J Physiol Gastrointest Liver Physiol* 296, G1370-81.
- Hwang, S.J. et al. (2009) *J Physiol* 587, 4887-904.
- Cho, H. et al. (2012) *Nat Neurosci* 15, 1015-21.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: Human

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