

Store at
-20C
#13359**CLCN3 (D8Y5Q) Rabbit mAb**

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IF-F	H M R	Endogenous	130-150	Rabbit IgG	#P51790	1182

Product Usage Information**Application**

Western Blotting
Immunoprecipitation
Immunofluorescence (Frozen)

Dilution

1:1000
1:50
1:100

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

CLCN3 (D8Y5Q) Rabbit mAb recognizes endogenous levels of total CLCN3 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human CLCN3 protein.

Background

Chloride channel 3 (CLCN3) is a voltage-gated chloride channel (CIC) family protein that mediates H⁺/Cl⁻ exchange across cell membranes. This 818 amino acid, multi-pass membrane protein is highly expressed in the brain and is especially abundant in the olfactory bulb, hippocampus, and cerebellum (1). CLCN3 protein localizes to endosomal compartments and synaptic vesicles where it contributes to vesicle acidification and proper synaptic vesicle neurotransmitter loading for GABAergic synaptic transmission (2,3). CAMKII-mediated phosphorylation of CLCN3 regulates chloride channel activity by regulating cell surface targeting of the CLCN3 chloride channel (4). Research studies show abnormally high CLCN3 expression at the cell surface of human glioma cells, and that CAMKII-dependent regulation of these channels contributes to glioma invasion (5).

Background References

1. Kawasaki, M. et al. (1994) *Neuron* 12, 597-604.
2. Stobrawa, S.M. et al. (2001) *Neuron* 29, 185-96.
3. Riazanski, V. et al. (2011) *Nat Neurosci* 14, 487-94.
4. Huang, P. et al. (2001) *J Biol Chem* 276, 20093-100.
5. Cuddapah, V.A. and Sontheimer, H. (2010) *J Biol Chem* 285, 11188-96.

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **IF-F:** Immunofluorescence (Frozen)

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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