Revision 3

Store at -20C

#91137

Pannexin-1 (D9M1C) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R	Endogenous	45-55, 19	Rabbit IgG	#Q96RD7	24145

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	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

Pannexin-1 (D9M1C) Rabbit mAb recognizes endogenous levels of total pannexin-1 protein. This antibody detects an amino-terminal pannexin-1 fragment produced by caspase cleavage.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human pannexin-1 protein.

Background

The pannexin family (pannexin-1, -2, and -3; PANX1-3) of gap junction proteins has homology to the invertebrate innexins and display distinct expression patterns (1). Pannexin-1 is widely expressed, with highest expression in the heart, brain, skeletal muscle, testis, and ovary (1,2). Pannexin-2 is predominately expressed in the brain (1,2) and pannexin-3 is found within the skin and connective tissues (1,3). Connexin family gap junction proteins form hemichannels that align adjacent cells, creating functional intercellular channels that are permeable to ions and small molecules. In contrast, pannexin proteins may not function as gap junction proteins since pannexins on adjacent cells may not align to form complete channels (3). These pannexin “hemichannels” may play a role in inflammation, apoptosis, and neuronal signaling by allowing permeability of ions, ATP, and potentially other small molecules into the extracellular space (4-6). Pannexin-1 can be activated by effector caspases (caspase-3 and -7), which leads to release of signal molecules that promote phagocytosis of apoptotic cells (7).

Background References

1. Baranova, A. et al. (2004) *Genomics* 83, 706-16.
2. Bruzzone, R. et al. (2003) *Proc Natl Acad Sci U S A* 100, 13644-9.
3. Penuela, S. et al. (2007) *J Cell Sci* 120, 3772-83.
4. Qu, Y. et al. (2011) *J Immunol* 186, 6553-61.
5. Silverman, W.R. et al. (2009) *J Biol Chem* 284, 18143-51.
6. MacVicar, B.A. and Thompson, R.J. (2010) *Trends Neurosci* 33, 93-102.
7. Chekeni, F.B. et al. (2010) *Nature* 467, 863-7.

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

Cross-Reactivity Key

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

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Limited Uses

force or effect.

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