

#14959 Store at -20°C

CGRP (D5R8F) Rabbit mAb



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IF-F, IF-IC	H M R	Endogenous	5	Rabbit IgG	#P06881	796

Product Usage Information

Application

Western Blotting
Immunofluorescence (Frozen)
Immunofluorescence (Immunocytochemistry)

Dilution

1:1000
1:400
1:800

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.

For a carrier free (BSA and azide free) version of this product see product #69734.

Specificity / Sensitivity

CGRP (D5R8F) Rabbit mAb recognizes endogenous levels of total CGRP protein. Rat cross-reactivity is determined by Immunofluorescence.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val114 of human CGRP protein.

Background

Calcitonin gene-related peptide (CGRP) is a peptide of 37 amino acids that belongs to the calcitonin (CT) family of peptide hormones. The calcitonin gene (CALCA) encodes a number of tissue-specific peptides through alternative splicing of mRNA transcripts and precursor protein cleavage (1). Both calcitonin and α -CGRP are produced from the CALCA gene, while a second gene (CALCB) encodes the related β -CGRP protein (2). α -CGRP and β -CGRP share similar activities and differ by three or fewer residues depending on the species (3). The CGRP peptide activates a heterotrimeric receptor complex that consists of the seven transmembrane-spanning calcitonin receptor-like receptor, the single transmembrane-spanning RAMP1 protein, and an intracellular receptor component protein (4,5). CGRP is expressed in the central and peripheral nervous system in mammals, where it exhibits several important physiologic roles. Research studies demonstrate that CGRP is a potent vasodilator (6) and a modulator of acetylcholine receptor function at neuromuscular junctions (7). Additional studies indicate that CGRP peptide is involved in feeding (8) and inflammatory pain (9). CGRP peptide also plays a key role in the physiology of migraine attacks. Specifically, CGRP peptide levels increase during acute migraine attacks, which can be ameliorated through treatment with CGRP antagonists (10).

Background References

1. Rosenfeld, M.G. et al. (1983) *Nature* 304, 129-35.
2. Amara, S.G. et al. (1985) *Science* 229, 1094-7.
3. Breimer, L.H. et al. (1988) *Biochem J* 255, 377-90.
4. McLatchie, L.M. et al. (1998) *Nature* 393, 333-9.
5. Evans, B.N. et al. (2000) *J Biol Chem* 275, 31438-43.
6. Struthers, A.D. et al. (1986) *Clin Sci (Lond)* 70, 389-93.
7. New, H.V. and Mudge, A.W. (1986) *Nature* 323, 809-11.
8. Lutz, T.A. et al. (1997) *Neurosci Lett* 230, 159-62.
9. Birklein, F. and Schmelz, M. (2008) *Neurosci Lett* 437, 199-202.
10. Ho, T.W. et al. (2010) *Nat Rev Neurol* 6, 573-82.

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

WB: Western Blotting **IF-F:** Immunofluorescence (Frozen)
IF-IC: Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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