

CGRP (D5R8F) Rabbit mAb

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|----------------|-------------|--------------|-----------|-----------------|-------------|-----------------|
| W, 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
1:200 - 1:400
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.

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

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

Cross-Reactivity Key

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

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

Alexa Fluor is a registered trademark of Life Technologies Corporation.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.