

Store at  
-20C  
#55920**mGluR5 (D6E7B) 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, IP, IF-F, IF-IC	H M R	Endogenous	150, 300	Rabbit IgG	#P41594	2915

**Product Usage Information****Application**

Western Blotting  
Immunoprecipitation  
Immunofluorescence (Frozen)  
Immunofluorescence (Immunocytochemistry)

**Dilution**

1:1000  
1:50  
1:200  
1:200

**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**

mGluR5 (D6E7B) Rabbit mAb recognizes endogenous levels of total mGluR5 protein.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with recombinant protein specific to the carboxy terminus of human mGluR5 protein.

**Background**

mGluR5, a metabotropic glutamate receptor, is a class C G protein-coupled receptor that signals through the Gαq/11-PLC-inositol 1,4,5 triphosphate pathway (1). mGluR5 is comprised of a large N-terminal extracellular domain, seven transmembrane domains, and a C-terminal intracellular domain. Glutamate binding to mGluR5 leads to an increase in intracellular calcium levels and stimulation of PKC activity (2). In neurons, mGluR5 is found in the post-synapse, in a complex with NMDA receptors, PSD-95, SHANK, and Homer (3). mGluR5 is also expressed in microglia and astrocytes (4). Neuronal mGluR5 has been shown to interact with amyloid beta oligomers, and mGluR5 antagonists exhibit neuroprotective effects (5) placing mGluR5 as a potential therapeutic target for Alzheimer's disease. In glial cells, mGluR5 appears to play an anti-inflammatory role by negatively regulating the release of inflammatory factors (6).

**Background References**

1. Abdul-Ghani, M.A. et al. (1996) *J Neurophysiol* 76, 2691-700.
2. Pin, J.P. and Duvoisin, R. (1995) *Neuropharmacology* 34, 1-26.
3. Tu, J.C. et al. (1999) *Neuron* 23, 583-92.
4. Verkhratsky, A. et al. (1998) *Physiol Rev* 78, 99-141.
5. Bruno, V. et al. (2000) *Neuropharmacology* 39, 2223-30.
6. Byrnes, K.R. et al. (2009) *Glia* 57, 550-60.

**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-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.

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

All other trademarks are the property of their respective owners. Visit [cellsignal.com/trademarks](http://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.