

mGluR1 (D5H10) Rabbit mAb



✓ 100 µl
(10 western blots)

Orders ■ 877-616-CELL (2355)
orders@cellsignal.com
Support ■ 877-678-TECH (8324)
info@cellsignal.com
Web ■ www.cellsignal.com

rev. 02/12/14

For Research Use Only. Not For Use In Diagnostic Procedures.

Entrez-Gene ID #2911
Swiss-Prot Acc. #Q13255

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IHC-P, IF-F Endogenous	H, M, R	145, >300 kDa	Rabbit IgG**

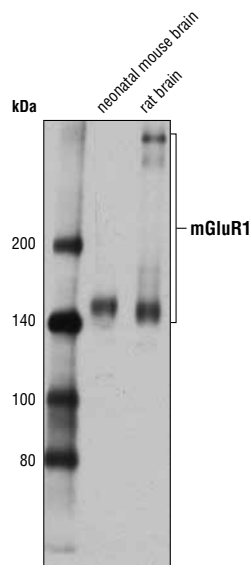
Background: Metabotropic glutamate receptor 1 (mGluR1) is a G protein-coupled receptor (GPCR) for the neurotransmitter glutamate in the mammalian brain. Unlike ionotropic receptors, metabotropic receptors do not form an ion channel pore themselves but are indirectly linked to ion channels (1). Both mGluR1 and mGluR5 are coupled to phospholipase C and activate inositol phospholipid metabolism via G protein-mediated mechanisms. Upon phosphatidylinositol activation, the second messenger calcium is released and generates a calcium-activated chloride current. Metabotropic glutamate receptors other than mGluR1 and mGluR5 inhibit adenylate cyclase (1-3). mGluR1 does not share sequence homology with conventional GPCRs (1). mGluR1 forms a homodimer and is linked to synaptic plasticity, as well as long-term potentiation and long-term depression. Furthermore, mGluR1 is a potential therapeutic target for various psychiatric and neurological diseases, including schizophrenia, epilepsy, and Parkinson and Alzheimer diseases (4-6).

Specificity/Sensitivity: mGluR1 (D5H10) Rabbit mAb recognizes endogenous levels of total mGluR1 protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu1105 of human mGluR1 protein.

Background References:

- (1) Pin, J.P. et al. (1994) *EMBO J* 13, 342-8.
- (2) Sugiyama, H. et al. (1987) *Nature* 325, 531-3.
- (3) Hermans, E. and Challiss, R.A. (2001) *Biochem J* 359, 465-84.
- (4) Niswender, C.M. et al. (2005) *Curr Top Med Chem* 5, 847-57.
- (5) Pellicciari, R. and Costantino, G. (1999) *Curr Opin Chem Biol* 3, 433-40.
- (6) Olive, M.F. (2009) *Curr Drug Abuse Rev* 2, 83-989.



Western blot analysis of extracts from neonatal mouse brain and rat brain using mGluR1 (D5H10) Rabbit mAb.

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.

***Species cross-reactivity is determined by western blot.**

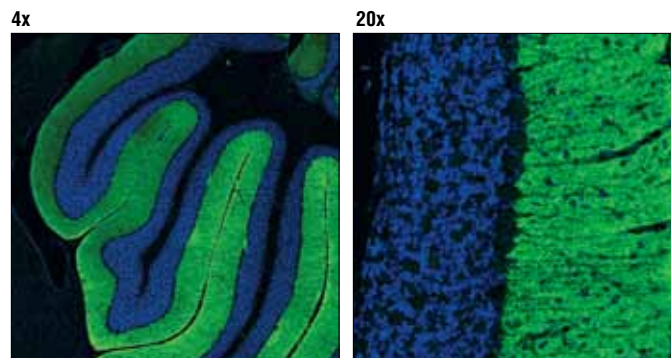
****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:50
Immunohistochemistry (Paraffin)	1:200†
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain® Antibody Diluent #8112
Detection reagent:	SignalStain® Boost (HRP, Rabbit) #8114
† Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.	
Immunofluorescence (IF-F)	1:800

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended complementary products.



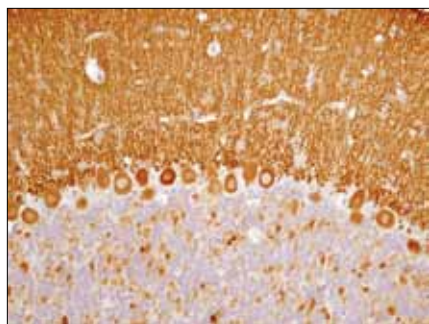
Confocal immunofluorescent analysis of adult mouse cerebellum using mGluR1 (D5H10) Rabbit mAb (green). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

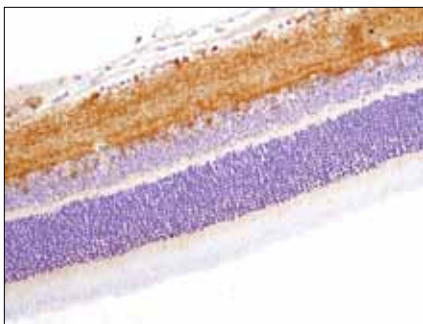
Tween® is a registered trademark of ICI Americas, Inc.

DRAQ5® is a registered trademark of Biostatus Limited.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.



Immunohistochemical analysis of paraffin-embedded mouse cerebellum using mGluR1 (D5H10) Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded rat retina using mGluR1 (D5H10) Rabbit mAb.