



Catalog Number:	RA16100	Host:	Rabbit
Product Type:	Affinity Purified Antibody	Species Reactivity:	Rat, Mouse, Human
Immunogen Sequence:	Synthetic peptide from rat mGluR5	Format:	Liquid in 0.02 M Phosphate buffer, 0.2 M NaCl, pH 7.6, containing 0.1 % sodium azide. Concentration . 0.49mg/ml
Applications:	Immunohistochemistry: 0.1-0.2 µg/mL Immunocytochemistry: 0.5 µg/mL Western Blotting: 0.1-0.5 µg/mL (for WB of human tissue see: http://www.molecularautism.com/content/pdf/2040-2392-4-15.pdf)		

Dilutions listed as a recommendation. Optimal dilution should be determined by investigator.

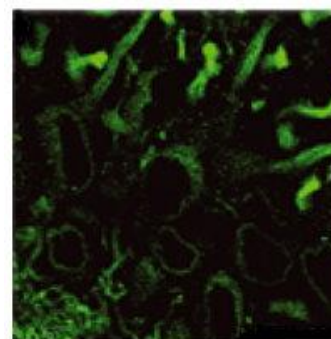
- Storage:** Antibody can be aliquotted and stored frozen at -20° C to -70° C in a manual defrost freezer for six months without detectable loss of activity. The antibody can be stored at 2° - 8° C for 1 month without detectable loss of activity. *Avoid repeated freeze-thaw cycles.*
- References:** [Talakad G Lohith, Emily K Osterweil, Masahiro Fujita, Kimberly J Jenko, Mark F Bear, Robert B Innis. Is metabotropic glutamate receptor 5 upregulated in prefrontal cortex in fragile X syndrome? Molecular Autism 2013, 4:15 \(24 May 2013\).](#)
- [Lasani S. Wijetunge, Sally M. Till, Thomas H. Gillingwater, Cali A. Ingham, and Peter C. Kind. mGluR5 Regulates Glutamate-Dependent Development of the Mouse Somatosensory Cortex. The Journal of Neuroscience, December 3, 2008, 28\(49\):13028-13037; doi:10.1523/JNEUROSCI.2600-08.2008.](#)

Application Notes

Immunohistochemistry:

Rat brain and mouse brain sections fixed with 4% paraformaldehyde containing 15% saturated picric acid in 0.1M PB, pH 7.4. Slide-mounted tissue sections were processed for indirect immunofluorescence. Slides were incubated with blocking buffer for 1 hour at room temperature. Primary antiserum was diluted with blocking buffer to the appropriate working concentration. Blocking buffer was removed and slides were incubated for 18-24 hours at 4°C with primary antiserum. Slides were rinsed 3 times and then incubated with secondary antibodies for 1 hour at room temperature. Slides were again rinsed 3 times and coverslipped. Staining was examined using fluorescence microscopy.

Image: mGluR5 staining of CA3 region of rat hippocampus (dilution 1:300). doi:10.1038/sj.npp.1300616.

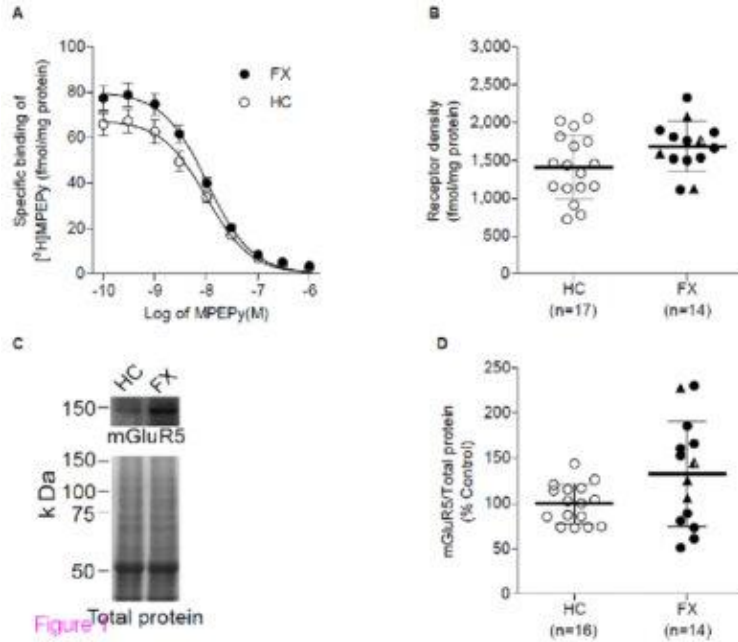


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Figure: mGluR5 receptor density and expression in prefrontal cortex of FXS individuals and healthy controls.

(A) Binding curves from homologous competition binding of 0.48 nM of [³H] MPEPy to membrane preparation from FXS and control subject samples at concentrations of unlabeled MPEPy ranging from 0.1 nM to 1 μM. Individual binding curves were obtained from the average of triplicate measurements for each unlabeled ligand concentration. Data represent mean ± standard error in the mean from 14 FXS patients or carriers (FX) and 17 healthy controls (HC). At low concentration of unlabeled ligand, specific binding was higher for FXS than control samples. (B) Results of unpaired t-test to compare the two groups. mGluR5 density tended to be higher (+16%; P = 0.058) in FXS patients than in the control group. Data represent mean ± standard deviation. Solid triangles (▲) in the FX group indicate the location of three FXS carriers; semisolid triangles indicate the location of a carrier with FXTAS. (C) Representative immunoblot for mGluR5. The mGluR5 band intensity was stronger for the FXS than control subject. Total protein stain of the same lanes confirmed equal-protein loading. (D) Average mGluR5: total protein ratio normalized to control subjects. The ratio was high and marginally significant (+32%; P=0.048) for the FXS group compared with controls. Data represent mean ± standard deviation. Solid triangles (▲) in the FX group indicate the location of three FXS carriers; semisolid triangles indicate the location of a carrier with FXTAS.



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