#3835 Store at –20°C

GABA(B)R1 Antibody

☑ 100 µl
(10 Western mini-blots)

Cell Signaling TECHNOLOGY®

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New 08/08

Entrez-Gene ID #2550
Swiss-Prot Acc. #Q9UBS5

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP Endogenous	H, M, R	130, 95 kDa	Rabbit**

Background: GABA (γ-aminobutyric acid) is the primary inhibitory neurotransmitter in the central nervous system and interacts with three different receptors: GABA(A), GABA(B) and GABA(C) receptor. The ionotropic GABA(A) and GABA(C) receptors are ligand-gated ion channels that produce fast inhibitory synaptic transmission. In contrast, the metabotropic GABA(B) receptor is coupled to G proteins that modulate slow inhibitory synaptic transmission (1). Functional GABA(B) receptors form heterodimers of GABA(B)R1 and GABA(B)R2 where GABA(B)R1 binds the ligand and GABA(B)R2 is the primary G protein contact site (2). Two isoforms of GABA(B)R1 are cloned: GABA(B)R1a is a 130kD protein and GABA(B)R1b is a 95kD protein (3). G proteins subsequently inhibit adenyl cylase activity and modulate inositol phospholipid hydrolysis. GABA(B) receptors have both pre- and postsynaptic inhibitions: presynaptic GABA(B) receptors inhibit neurotransmitter release through suppression of high threshold calcium channels, while postsynaptic GABA(B) receptors inhibit through coupled activation of inwardly rectifying potassium channels. In addition to synaptic inhibition, GABA(B) receptors may also be involved in hippocampal long-term potentiation, slow wave sleep and muscle relaxation (1).

Specificity/Sensitivity: GABA(B)R1 Antibody detects endogenous levels of total GABA(B)R1 protein.

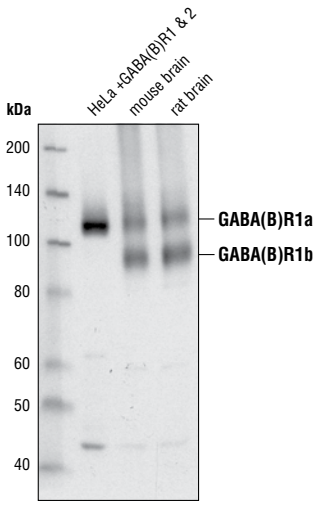
Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide (KLH-coupled) corresponding to human GABA(B)R1. Antibodies are purified by peptide affinity chromatography.

Background References:

(1) Jones, K.A. et al. (2000) *Neuropsychopharmacology* 23, S41–9.

(2) Duthey, B. et al. (2002) *J Biol Chem* 277, 3236–41.

(3) Kaupmann, K. et al. (1997) *Nature* 386, 239–46.



Western blot analysis of extracts from HeLa cells, co-transfected with constructs overexpressing GABA(B)R1 and GABA(B)R2, and mouse and rat brain using GABA(B)R1 Antibody.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. 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

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

Companion Products:

G Protein α Subunit Antibody #3992

EAAT2 Antibody #3838

Phospho-µ-Opioid Receptor (Ser375) Antibody #3451

PI3 Kinase p110α (C73F8) Rabbit mAb #4249

PI3 Kinase p110β (C33D4) Rabbit mAb #3011

PI3 Kinase p85 (19H8) Rabbit mAb #4257

Phototope®-HRP Western Blot Detection System, Anti-rabbit IgG, HRP-linked Antibody #7071

Anti-rabbit IgG, HRP-linked Antibody #7074

Prestained Protein Marker, Broad Range (Premixed Format) #7720

Biotinylated Protein Ladder Detection Pack #7727

20X LumiGLO® Reagent and 20X Peroxide #7003

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

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.

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**—zebra fish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.