10320 Camino Santa Fe, Suite A
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

GABA-B Receptor 1 Antibody
GABA B Receptor 1 Antibody, Clone S93A-49
Catalog # ASM10237

Specification

GABA-B Receptor 1 Antibody - Product Information

Application	**WB, ICC**
Primary Accession	Q9Z0U4
Other Accession	NP_112290.2
Host	**Mouse**
Isotype	**IgG1**
Reactivity	**Human, Mouse, Rat**
Clonality	**Monoclonal**

Description
Mouse Anti-Rat GABA-B Receptor 1 Monoclonal IgG1

Target/Specificity
Detects ~115kDa. No cross-reactivity against GABA(B)R2.

Other Names
GABA-B receptor 1 Antibody, GABA-B-R1 Antibody, GABR1_Human Antibody, Gamma aminobutyric acid receptor 1 Antibody, GB1 Antibody, GPRC3A Antibody

Immunogen
Fusion protein amino acids 873-977 (cytoplasmic C-terminus) of rat GABA(B)R1

Purification
Protein G Purified

Storage	**-20ºC**

Storage Buffer
PBS pH7.4, 50% glycerol, 0.09% sodium azide

Shipping Temperature	**Blue Ice or 4ºC**

Certificate of Analysis
1 µg/ml of SMC-403 was sufficient for detection of GABA(B)R1 in 20 µg of rat brain membrane lysate and assayed by colorimetric immunoblot analysis using goat anti-mouse IgG:HRP as the secondary antibody.

Cellular Localization
Cell Membrane | Cell Junction | Synapse | Postsynaptic Cell Membrane

GABA-B Receptor 1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot

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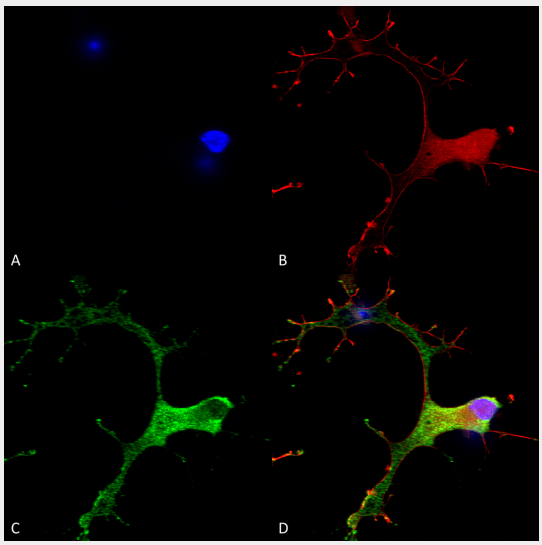
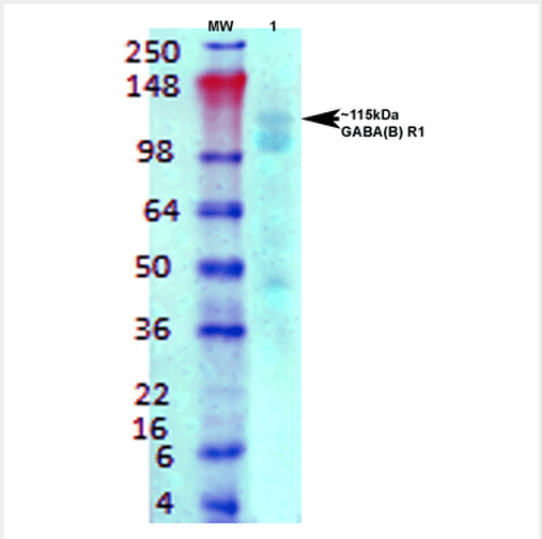
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

GABA-B Receptor 1 Antibody - Images



Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-GABA-B Receptor 1 Monoclonal Antibody, Clone N93A/49 (ASM10237). Tissue: Neuroblastoma cells (SH-SY5Y). Species: Human. Fixation: 4% PFA for 15 min. Primary Antibody: Mouse Anti-GABA-B Receptor 1 Monoclonal Antibody (ASM10237) at 1:50 for overnight at 4°C with slow rocking. Secondary Antibody: AlexaFluor 488 at 1:1000 for 1 hour at RT. Counterstain: Phalloidin-iFluor 647 (red) F-Actin stain; Hoechst (blue) nuclear stain at 1:800, 1.6mM for 20 min at RT. (A) Hoechst (blue) nuclear stain. (B) Phalloidin-iFluor 647 (red) F-Actin stain. (C) GABA-B Receptor 1 Antibody (D) Composite.



Western Blot analysis of Rat brain membrane lysate showing detection of GABA B Receptor 1 protein using Mouse Anti-GABA B Receptor 1 Monoclonal Antibody, Clone N93A/49 (ASM10237). Primary Antibody: Mouse Anti-GABA B Receptor 1 Monoclonal Antibody (ASM10237) at 1:1000.

GABA-B Receptor 1 Antibody - 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 have been cloned: GABA(B)R1a is a 130 kD protein and GABA(B)R1b is a 95 kD 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).

GABA-B Receptor 1 Antibody - 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.