Datasheet for ABIN2484090

anti-GABBR1 antibody (AA 873-977) (Atto 390)

3 Images

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Overview

Quantity:	100 µg
Target:	GABBR1
Binding Specificity:	AA 873-977
Reactivity:	Rat
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This GABBR1 antibody is conjugated to Atto 390
Application:	Western Blotting (WB), Immunofluorescence (IF), Immunocytochemistry (ICC)

Product Details

Immunogen:	Fusion protein amino acids 873-977 (cytoplasmic C-terminus) of rat GABA(B)R1
Clone:	S93A-49
Isotype:	IgG1
Specificity:	Detects ~115 kDa. No cross-reactivity against GABA(B)R2.
Cross-Reactivity:	Human, Mouse, Rat
Purification:	Protein G Purified

Target Details

Target:	GABBR1
Alternative Name:	GABA B Receptor 1 (GABBR1 Products)

Target Details

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).
Gene ID:	81657
NCBI Accession:	NP_112290
UniProt:	Q9Z0U4
Pathways:	Positive Regulation of Peptide Hormone Secretion, cAMP Metabolic Process

Application Details

Application Notes:	• WB (1:1000) • optimal dilutions for assays should be determined by the user.
Comment:	1 µg/ml of ABIN2484090 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.
Restrictions:	For Research Use only

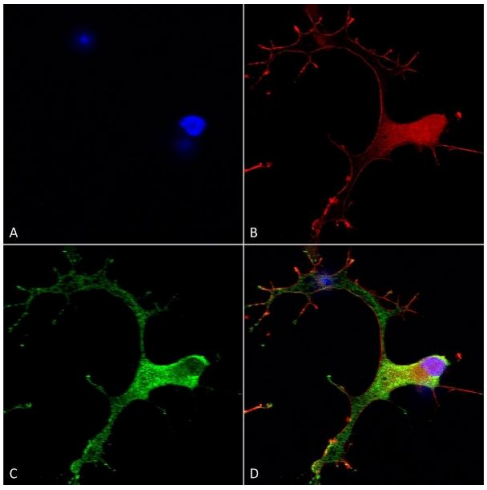
Handling

Format:	Liquid
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4, 50 % glycerol, 0.09 % sodium azide, Storage buffer may change when conjugated
Preservative:	Sodium azide

Handling

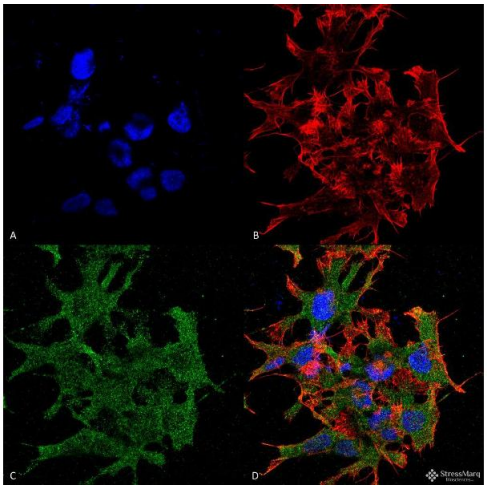
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C
Storage Comment:	Conjugated antibodies should be stored at 4°C

Images



Immunocytochemistry

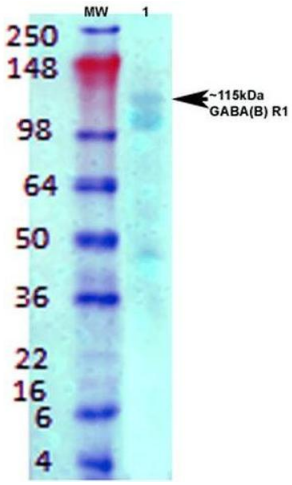
Image 1. Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-GABA-B Receptor 1 Monoclonal Antibody, Clone S93A-49 (ABIN2484090). Tissue: Neuroblastoma cells (SH-SY5Y). Species: Human. Fixation: 4 % PFA for 15 min. Primary Antibody: Mouse Anti-GABA-B Receptor 1 Monoclonal Antibody (ABIN2484090) 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, 1.6 mM 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.



Immunofluorescence (fixed cells)

Image 2. Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-GABA-B Receptor 1 Monoclonal Antibody, Clone S93A-49 . Tissue: Neuroblastoma cell line (SK-N-BE). Species: Human. Fixation: 4% Formaldehyde for 15 min at RT. Primary Antibody: Mouse Anti-GABA-B Receptor 1 Monoclonal Antibody at 1:100 for 60 min at RT. Secondary Antibody: Goat Anti-Mouse ATTO 488 at 1:100 for 60 min at RT. Counterstain: Phalloidin Texas Red F-Actin stain; DAPI (blue) nuclear stain at 1:1000, 1:5000 for 60min RT, 5min RT. Localization: Cell Membrane. Magnification: 60X. (A) DAPI (blue) nuclear stain (B) Phalloidin Texas Red F-Actin stain (C) GABA-B Receptor 1 Antibody (D) Composite.

Images



Western Blotting

Image 3. 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 S93A-49 . Primary Antibody: Mouse Anti-GABA B Receptor 1 Monoclonal Antibody at 1:1000.