Human/Mouse/Rat $GABA_B$ R1 Alexa Fluor® 647-conjugated Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF7000R
100 µg

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects recombinant mouse and rat $GABA_B$ R1 in direct ELISAs and Western blots.Detects human and rat $GABA_B$ R1 in Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant rat $GABA_B$ R2 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant rat $GABA_B$ R1 Gly17-Leu586 Accession # Q9Z0U4
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

$GABA_B$ R1 (GABA-B receptor subunit 1; also GABA-BR1, GABBR1 and GB1) is a multispan member of the GABA-B receptor subfamily, GPCR-3 family of proteins. It forms an obligatory heterodimer with GABA-BR2, creating a G-protein metabotropic GABA receptor that inhibits adenylyl cyclase activity and activates K^+ channels. Presynaptically, this blocks neurotransmitter release; postsynaptically, it lowers neuron excitability. Rat $GABA_B$ R1 is 991 amino acids (aa) in length. It is a 7-transmembrane glycoprotein that contains a 16 aa signal sequence, an extended N-terminal extracellular region (aa 17-590) that contains two SUSHI domains (aa 29-158), and a long C-terminal cytoplasmic domain (aa 885-991). There are several splice variants with predicted molecular weights ranging from 90 to 111 kDa and multiple glycosylation sites. The 991 aa isoform described above is called $GABA_B$ R1e (R1e). There is also a 960 aa, 130 kDa isoform that shows a deletion of aa 771-801. This variant (R1a) is associated with postsynaptic membranes. A third isoform (R1b) is 844 aa in length and 100 kDa in size, and possesses both a deletion of aa 771-801, and a 47 aa substitution for aa 1-163. This variant is presynaptic in location. Two other isoforms are variants of $GABA_B$ R1b. Each show the same N-terminal substitution, with a fourth isoform (R1c) retaining aa 771-801, and a fifth isoform (R1d) deleting aa 771-801, coupled to a 25 aa substitution for aa 935-991. Over aa 17-586, rat $GABA_B$ R1e/a shares 99% aa identity with both mouse and human $GABA_B$ R1.

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