

GABA_B R1 α (A-19): sc-7340

BACKGROUND

In the central nervous system (CNS), γ -aminobutyric acid (GABA) is the main inhibitory neurotransmitter that functions to regulate neuronal firing. GABA exerts its effects through two different kinds of receptors: ionotropic receptors (GABA_A R and GABA_C R), which produce fast inhibitory signals, and metabotropic receptors (GABA_B R), which produce slow inhibitory signals. The GABA_B R receptor is a heterodimer that consists of two multi-pass membrane proteins, designated GABA_B R1 and GABA_B R2, both of which belong to the G protein-coupled receptor family and are highly expressed in brain tissue. Together, GABA_B R1 and GABA_B R2 play a crucial role in the fine-tuning of inhibitory synaptic transmissions and are implicated in slow wave sleep, muscle relaxation, hippocampal long-term potentiation and antinociception events. Both GABA_B R1 and GABA_B R2 are regulated by G proteins that have a variety of functions, including activation of potassium channels, inhibition of adenyl cyclase (A cyclase) activity and modulation of inositol phospholipid hydrolysis.

CHROMOSOMAL LOCATION

Genetic locus: GABBR1 (human) mapping to 6p22.1; Gabbr1 (mouse) mapping to 17 B1.

SOURCE

GABA_B R1 α (A-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of GABA_B R1 α of rat origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7340 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GABA_B R1 α (A-19) is recommended for detection of GABA_B R1 α of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GABA_B R1 α (A-19) is also recommended for detection of GABA_B R1 α in additional species, including bovine and porcine.

Suitable for use as control antibody for GABA_B R1 siRNA (h): sc-42459, GABA_B R1 siRNA (m): sc-42460, GABA_B R1 shRNA Plasmid (h): sc-42459-SH, GABA_B R1 shRNA Plasmid (m): sc-42460-SH, GABA_B R1 shRNA (h) Lentiviral Particles: sc-42459-V and GABA_B R1 shRNA (m) Lentiviral Particles: sc-42460-V.

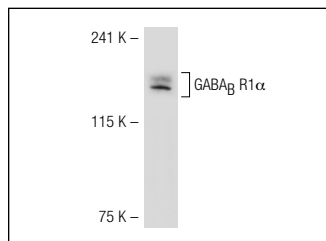
Molecular Weight of GABA_B R1 α : 142 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, IMR-32 cell lysate: sc-2409 or H4 cell lysate: sc-2408.

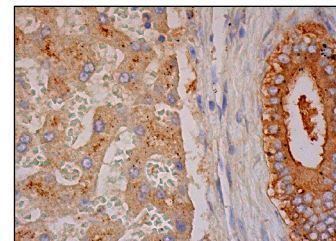
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



GABA_B R1 α (A-19): sc-7340. Western blot analysis of GABA_B R1 α expression in HeLa nuclear extract.



GABA_B R1 α (A-19): sc-7340. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes and cytoplasmic and membrane staining of bile duct cells.

SELECT PRODUCT CITATIONS

1. Leite-Morris, K.A., et al. 2002. Opiate-induced motor stimulation is regulated by γ -aminobutyric acid type B receptors found in the ventral tegmental area in mice. *Neurosci. Lett.* 317: 119-122.
2. Gliddon, C.M., et al. 2005. GABA_A receptor subunit expression in the guinea pig vestibular nucleus complex during the development of vestibular compensation. *Exp. Brain Res.* 166: 71-77.
3. Sasaki, S., et al. 2007. γ -aminobutyric acid specifically inhibits progression of tubular fibrosis and atrophy in nephrectomized rats. *Biol. Pharm. Bull.* 30: 687-691.
4. Girosi, L., et al. 2007. γ -aminobutyric acid and related molecules in the sea fan *Eunicella cavolini* (Cnidaria: Octocorallia): a biochemical and immunohistochemical approach. *Cell Tissue Res.* 329: 187-196.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **GABA_B R1 (D-2): sc-166408** or **GABA_B R1 (C-11): sc-398901**, our highly recommended monoclonal alternatives to GABA_B R1 α (A-19).