

GABA_A R α 2 (N-19): sc-7350

BACKGROUND

GAD-65 and GAD-67, glutamate decarboxylases function to catalyze the production of GABA (γ -aminobutyric acid). In the central nervous system GABA functions as the main inhibitory transmitter by increasing a Cl⁻ conductance that inhibits neuronal firing. GABA has been shown to activate both ionotropic (GABA_A) and metabotropic (GABA_B) receptors as well as a third class of receptors called GABA_C. Both GABA_A and GABA_C are ligand-gated ion channels, however, they are structurally and functionally distinct. Members of the GABA_A receptor family include GABA_A R α 1-6, GABA_A R β 1-3, GABA_A R γ 1-3, GABA_A R δ , GABA_A R ϵ , GABA_A R ρ 1 and GABA_A R ρ 2. The GABA_B family is composed of GABA_B R1 α and GABA_B R1 β . GABA transporters have also been identified and include GABA T-1, GABA T-2 and GABA T-3 (also designated GAT-1, -2, and -3). The GABA transporters function to terminate GABA action.

CHROMOSOMAL LOCATION

Genetic locus: GABRA2 (human) mapping to 4p12; Gabra2 (mouse) mapping to 5 C3.1.

SOURCE

GABA_A R α 2 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of GABA_A R α 2 of human 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-7350 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

GABA_A R α 2 (N-19) is recommended for detection of GABA_A R α 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); may cross-react with GABA_A R α 1, GABA_A R α 3 and GABA_A R α 5.

GABA_A R α 2 (N-19) is also recommended for detection of GABA_A R α 2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for GABA_A R α 2 siRNA (h): sc-42427, GABA_A R α 2 siRNA (m): sc-42428, GABA_A R α 2 shRNA Plasmid (h): sc-42427-SH, GABA_A R α 2 shRNA Plasmid (m): sc-42428-SH, GABA_A R α 2 shRNA (h) Lentiviral Particles: sc-42427-V and GABA_A R α 2 shRNA (m) Lentiviral Particles: sc-42428-V.

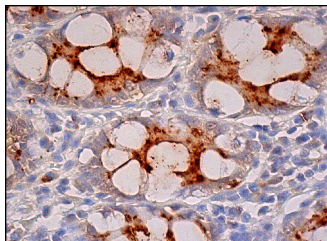
Molecular Weight of GABA_A R α 2: 52 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz[™]: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



GABA_A R α 2 (N-19): sc-7350. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Ferguson, S.C., et al. 2002. GABA and development of the *Xenopus* optic projection. *J. Neurobiol.* 51: 272-284.
2. Stewart, R.R., et al. 2002. Neural progenitor cells of the neonatal rat anterior subventricular zone express functional GABA_A receptors. *J. Neurobiol.* 50: 305-322.
3. Ruiz, A., et al. 2003. GABA_A receptors at hippocampal mossy fibers. *Neuron* 39: 961-973.
4. Foley, C.M., et al. 2003. GABA_A α 1 and α 2 receptor subunit expression in rostral ventrolateral medulla in nonpregnant and pregnant rats. *Brain Res.* 975: 196-206.
5. Roberts, S.S., et al. 2009. GABA receptor expression in benign and malignant thyroid tumors. *Pathol. Oncol. Res.* E-published.
6. Shen, W., et al. 2009. Type A GABA-receptor-dependent synaptic transmission sculpts dendritic arbor structure in *Xenopus* tadpoles *in vivo*. *J. Neurosci.* 29: 5032-5043.

STORAGE

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

PROTOCOLS

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