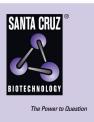
SANTA CRUZ BIOTECHNOLOGY, INC.

GABA_A Rβ2 (N-19): sc-7363



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 CI-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 transporters function to terminate GABA action.

REFERENCES

- 1. Nelson, H., et al. 1990. Cloning of the human brain GABA transporter. FEBS Lett. 269: 181-184.
- 2. Borden, L.A., et al. 1992. Molecular heterogeneity of the γ -aminobutyric acid (GABA) transport system. Cloning of two novel high affinity GABA transporters from rat brain. J. Biol. Chem. 267: 21098-21104.
- Dirkx, R., Jr., et al. 1995. Targeting of the 67 kDa isoform of glutamic acid decarboxylase to intracellular organelles is mediated by its interaction with the NH₂-terminal region of the 65 kDa isoform of glutamic acid decarboxylase. J. Biol. Chem. 270: 2241-2246.

SOURCE

 $GABA_A R\beta2$ (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of $GABA_A R\beta2$ of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-7363 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GABA_A R β 2 (N-19) is recommended for detection of GABA_A R β 1, GABA_A R β 2 and GABA_A R β 3 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GABA_A R β 2 (N-19) is also recommended for detection of GABA_A R β 1, GABA_A R β 2 and GABA_A R β 3 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of GABA_A Rβ2: 54-57 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or mouse brain extract: sc-2253.

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) Immunofluo-rescence: 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.

SELECT PRODUCT CITATIONS

- 1. Russek, S.J., et al. 2000. An initiator element mediates autologous downregulation of the human type A γ -aminobutyric acid receptor β 1 subunit gene. Proc. Natl. Acad. Sci. USA 97: 8600-8605.
- Nguyen, L., et al. 2003. Autocrine/paracrine activation of the GABA_A receptor inhibits the proliferation of neurogenic polysialylated neural cell adhesion molecule-positive (PSA-NCAM⁺) precursor cells from postnatal striatum. J. Neurosci. 23: 3278-3294.
- Heck, W.L., et al. 2003. Early GABA_A receptor clustering during the development of the rostral nucleus of the solitary tract. J. Anat. 202: 387-396.
- Roberts, S.S., et al. 2009. GABA receptor expression in benign and malignant thyroid tumors. Pathol. Oncol. Res. 15: 645-650.
- Vidya Priyadarsini, R., et al. 2012. Aberrant activation of Wnt/β-catenin signaling pathway contributes to the sequential progression of DMBAinduced HBP carcinomas. Oral. Oncol. 48: 33-39.

STORAGE

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

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.