SANTA CRUZ BIOTECHNOLOGY, INC.

$GABA_A$ Rρ2 (W-15): sc-30252

The Power to Question

BACKGROUND

γ-aminobutyric acid (GABA) receptors are pentameric membrane proteins that operate GABA-gated chloride channels and inhibit neurotransmission in the central nervous system. The ρ receptor subunits do not exhibit sensitivity to typical GABA receptor modulators such as bicuculline, hexobarbital, and diazepam. While the rho 1 subunit localizes specifically to the retina, rho 2 expresses in all regions of the brain, though levels were still highest in the retina, implying a role for both subunits in visual pathways.

REFERENCES

1. Wang, T.L., et al. 1994. A novel γ-aminobutyric acid receptor subunit (ρ 2) cloned from human retina forms bicuculline-insensitive homooligomeric receptors in *Xenopus* oocytes. J. Neurosci. 14: 6524-6531.
2. Enz, R., et al. 1995. Expression of GABA receptor ρ 1 and ρ 2 subunits in the retina and brain of the rat. Eur. J. Neurosci. 7: 1495-1501.
3. Xe, H. 1998. Identification of major phylogenetic branches of inhibitory lig-and-gated channel receptors. J. Mol. Evol. 47: 323-333.
4. Mehta, A. K., et al. 1999. An update on GABAA receptors. Brain Res. Brain Res. Rev. 29: 196-217.
5. Enz, R., et al. 1999. GABAC receptor rho subunits are heterogeneously expressed in the human CNS and form homo- and heterooligomers with distinct physical properties. Eur. J. Neurosci. 11: 41-50.
6. Rudolph, U., et al. 2001. GABA(A) receptor subtypes: dissecting their pharmacological functions. Trends Pharmacol. Sci. 22: 188-194.
7. Didelon, F., et al. 2002. γ-Aminobutyric acidA ρ receptor subunits in the developing rat hippocampus. J. Neurosci. Res. 67: 739-744.

CHROMOSOMAL LOCATION

Genetic locus: GABRR2 (human) mapping to 6q15; Gabrr2 (mouse) mapping to 4 A5.

SOURCE

$GABA_A$ Rρ2 (W-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of $GABA_A$ Rρ2 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-30252 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

$GABA_A$ Rρ2 (W-15) is recommended for detection of precursor and mature $GABA_A$ Rρ2 of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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)

$GABA_A$ Rρ2 (W-15) is also recommended for detection of precursor and mature $GABA_A$ Rρ2 in additional species, including equine and canine.

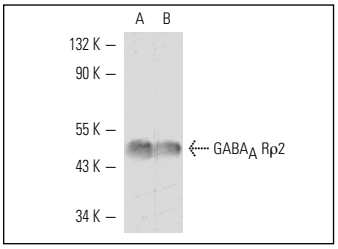
Molecular Weight of $GABA_A$ Rρ2: 51 kDa.

Positive Controls: rat brain extract: sc-2392 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



$GABA_A$ Rρ2 (W-15): sc-30252. Western blot analysis of $GABA_A$ Rρ2 expression in rat brain (**A**) and mouse brain (**B**) tissue extracts.

PROTOCOLS

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