SANTA CRUZ BIOTECHNOLOGY, INC.

$GABA_C$ Rρ2 (N-15): sc-21340

BACKGROUND

In the central nervous system inhibitory neurotransmission is primarily achieved through activation of receptors for γ-aminobutyric acid (GABA). The GABA receptor type C ($GABA_C$) is a ligand-gated ion channel with pharmacological properties distinct from the $GABA_A$ receptor. $GABA_A$ and $GABA_C$ receptors form ligand-gated chloride channels. Retinal γ-aminobutyric acid type C ($GABA_C$) receptors consist of Rho subunits. Mouse Rho2 message does not appear until P9, peaks at P15 and remains at this level through adulthood. Picrotoxin binds to the $GABA_C$ receptor in both channel open and closed states.

REFERENCES

1. Cutting G.R., et al. 1992. Identification of a putative γ-aminobutyric acid (GABA) receptor subunit Rho2 cDNA and colocalization of the genes encoding Rho2 (GABRR2) and Rho1 (GABRR1) to human chromosome 6q14-q21 and mouse chromosome 4. Genomics 12: 801-806.
2. Bailey M.E., et al. 1999. Genetic linkage and radiation hybrid mapping of the three human $GABA_C$ receptor Rho subunit genes: GABRR1, GABRR2 and GABRR3. Biochim. Biophys. Acta 1447: 307-312.
3. Greka, A., et al. 2000. Expression of $GABA_C$ receptor Rho1 and Rho2 subunits during development of the mouse retina. Eur. J. Neurosci. 12: 3575-3582.
4. Enz, R. 2001. $GABA_C$ receptors: a molecular view. Biol. Chem. 382: 1111-1122.
5. Ichinose, T., et al. 2002. GABA transporters regulate inhibition in the retina by limiting $GABA_C$ receptor activation. J. Neurosci. 22: 3285-3292.
6. Milligan, C.J., et al. 2004. Evidence for inhibition mediated by coassembly of $GABA_A$ and $GABA_C$ receptor subunits in native central neurons. J. Neurosci. 24: 7241-7250.
7. Carland, J.E., et al. 2004. Charged residues at the 2' position of human $GABA_C$ Rho1 receptors invert ion selectivity and influence open state probability. J. Biol. Chem. 279: 54153-54160.

CHROMOSOMAL LOCATION

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

SOURCE

$GABA_C$ Rρ2 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of $GABA_C$ Rρ2 of human origin.

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.

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-21340 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

$GABA_C$ Rρ2 (N-15) is recommended for detection of $GABA_C$ 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), 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).

$GABA_C$ Rρ2 (N-15) is also recommended for detection of $GABA_C$ Rρ2 in additional species, including equine and canine.

Suitable for use as control antibody for $GABA_C$ Rρ2 siRNA (h): sc-105385, $GABA_C$ Rρ2 siRNA (m): sc-145302, $GABA_C$ Rρ2 shRNA Plasmid (h): sc-105385-SH, $GABA_C$ Rρ2 shRNA Plasmid (m): sc-145302-SH, $GABA_C$ Rρ2 shRNA (h) Lentiviral Particles: sc-105385-V and $GABA_C$ Rρ2 shRNA (m) Lentiviral Particles: sc-145302-V.

Molecular Weight of $GABA_C$ Rρ2: 50 kDa.

Positive Controls: H4 cell lysate: sc-2408 or Y79 cell lysate: sc-2240.

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.

RESEARCH USE

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