**BACKGROUND**

GAD-65 and GAD-67, glutamate decarboxylases of 65 kDa and 67 kDa, respectively, function to catalyze the production of GABA (gamma-aminobutyric acid). In the central nervous system GABA (gamma-aminobutyric acid) functions as the main inhibitory transmitter by increasing a Cl⁻ conductance that inhibits neuronal firing. GABA has been shown to activate both ionotropic (GABAA) and metabotropic (GABAB) receptors as well as a third class of receptors called GABAC. Both GABAA and GABAC receptors are ligand-gated ion channels; however, they are structurally and functionally distinct. GABAC receptors (GABAᵡ receptor ρ₃) mediate rapid inhibitory neurotransmission in retina. Three human genes, r1 (GABRR1), r2 (GABRR2) and r3 (GABRR3), encode the three polypeptides that comprise this receptor. GABRR1 and GABRR2 are located close together, in a region of chromosome 6q that contains loci for inherited disorders of the eye, but GABRR3 maps to chromosome 3q11-q13.3. The r polypeptide genes, which are thought to share a common ancestor with GABAA receptor subunit genes, diverged at an early stage in the evolution of this gene family. The expression of GABAᵡ ρ₃ subunits is not restricted to the retina, but significant expression can also be detected in many other brain regions, especially in those belonging to the visual pathways.

**REFERENCES**

6. 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**

GABAᵡ Rρ₃ (R-110) is a rabbit polyclonal antibody raised against amino acids 355-464 mapping at the C-terminus of GABAᵡ Rρ₃ of rat origin.

**PRODUCT**

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

**APPLICATIONS**

GABAᵡ Rρ₃ (R-110) is recommended for detection of GABAᵡ Rρ₃ of 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).

Suitable for use as control antibody for GABAᵡ Rρ₃ siRNA (m): sc-42466. Molecular Weight of GABAᵡ Rρ₃: 58 kDa.

**RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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-2780 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

**DATA**

GABAᵡ Rρ₃ (R-110): sc-28793. Western blot analysis of GABAᵡ Rρ₃ expression in rat testis tissue extract.

**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.