SANTA CRUZ BIOTECHNOLOGY, INC.

GlyT2 (B-4): sc-390090

BACKGROUND

Na^+/Cl^- dependent neurotransmitter transporters are a superfamily of transmembrane proteins that contain 12 membrane spanning regions. Specifically, the highly hydrophobic Na^+/Cl^- dependent glycine transporters (GlyT) are crucial for the termination of neurotransmission at glycinergic synapses. Two different GlyT genes encode GlyT2 and GlyT1, which exists as two isoforms produced by alternative splicing of the same gene located on human chromosome 1p31.3. The GlyT1 gene may be an early marker of neural development and encodes glia-specific transporter proteins. Although GlyT1 and GlyT2 are both expressed in the brain and spinal cord, each shows a unique pattern of expression. GlyT1 is found only in the white matter of the CNS, whereas GlyT2 is found in the gray matter of the CNS as well as in macrophages and mast cells in peripheral tissues. The anatomic distribution of GlyT2 mRNA suggests that glycine may act as a supraspinal neurotransmitter and may function as a chemical messenger outside the CNS.

REFERENCES

1. Liu, Q.R., et al. 1992. Cloning and expression of a glycine transporter from mouse brain. FEBS Lett. 305: 110-114.
2. Borowsky, B., et al. 1993. Two glycine transporter variants with distinct localization in the CNS and peripheral tissues are encoded by a common gene. Neuron 10: 851-863.
3. Kim, K.M., et al. 1994. Cloning of the human glycine transporter type 1: molecular and pharmacological characterization of novel isoform variants and chromosomal localization of the gene in the human and mouse genomes. Mol. Pharmacol. 45: 608-617.
4. Adams, R.H., et al. 1995. Gene structure and glial expression of the glycine transporter GlyT1 in embryonic and adult rodents. J. Neurosci. 15: 2524-2532.

CHROMOSOMAL LOCATION

Genetic locus: SLC6A5 (human) mapping to 11p15.1; Slc6a5 (mouse) mapping to 7 B5.

SOURCE

GlyT2 (B-4) is a mouse monoclonal antibody raised against amino acids 50-204 mapping near the N-terminus of GlyT2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GlyT2 (B-4) is available conjugated to agarose (sc-390090 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390090 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390090 PE), fluorescein (sc-390090 FITC), Alexa Fluor® 488 (sc-390090 AF488), Alexa Fluor® 546 (sc-390090 AF546), Alexa Fluor® 594 (sc-390090 AF594) or Alexa Fluor® 647 (sc-390090 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390090 AF680) or Alexa Fluor® 790 (sc-390090 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

GlyT2 (B-4) is recommended for detection of GlyT2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 GlyT2 siRNA (h): sc-41976, GlyT2 siRNA (m): sc-41977, GlyT2 shRNA Plasmid (h): sc-41976-SH, GlyT2 shRNA Plasmid (m): sc-41977-SH, GlyT2 shRNA (h) Lentiviral Particles: sc-41976-V and GlyT2 shRNA (m) Lentiviral Particles: sc-41977-V.

Molecular Weight (predicted) of GlyT2: 87 kDa,

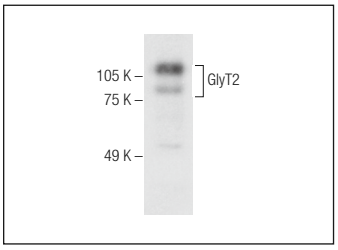
Molecular Weight (observed) of GlyT2: 90-110 kDa.

Positive Controls: rat brain extract: sc-2392.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



GlyT2 (B-4): sc-390090. Western blot analysis of GlyT2 expression in rat brain 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 for detailed protocols and support products.