

GABA T-3 (G-6): sc-376001

BACKGROUND

As Glutamate decarboxylases, GAD-65 and GAD-67 function to catalyze the production of GABA (γ -aminobutyric acid). In the central nervous system, GABA functions as the main inhibitory transmitter by increasing the chlorine 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. GABA transporters have also been identified and include GABA T-1, GABA T-2 and GABA T-3 (also designated GAT-1, -2, and -3). GABA T-3 is a 632 amino acid membrane protein that is expressed in brain, specifically in glial cells. The GABA transporters function to terminate GABA action by actively pumping GABA back into presynaptic terminals.

CHROMOSOMAL LOCATION

Genetic locus: Slc6a11 (mouse) mapping to 6 E3.

SOURCE

GABA T-3 (G-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 601-625 at the C-terminus of GABA T-3 of rat origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GABA T-3 (G-6) is available conjugated to agarose (sc-376001 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376001 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376001 PE), fluorescein (sc-376001 FITC), Alexa Fluor® 488 (sc-376001 AF488), Alexa Fluor® 546 (sc-376001 AF546), Alexa Fluor® 594 (sc-376001 AF594) or Alexa Fluor® 647 (sc-376001 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376001 AF680) or Alexa Fluor® 790 (sc-376001 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376001 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

GABA T-3 (G-6) is recommended for detection of GABA T-3 of mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

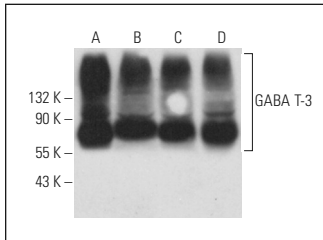
Suitable for use as control antibody for GABA T-3 siRNA (m): sc-41963, GABA T-3 shRNA Plasmid (m): sc-41963-SH and GABA T-3 shRNA (m) Lentiviral Particles: sc-41963-V.

Molecular Weight of GABA T-3: 70 kDa.

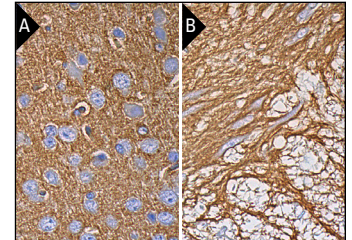
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



GABA T-3 (G-6): sc-376001. Western blot analysis of goat anti-mouse IgG_{2b}-HRP expression in mouse brain (A), rat brain (B), rat cerebellum (C) and rat hippocampus (D) tissue extracts.



GABA T-3 (G-6): sc-376001. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse brain tissue showing neuropil staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded rat spinal cord tissue showing neuropil staining of grey matter and nerve fibers staining of white matter (B).

SELECT PRODUCT CITATIONS

- Moldavan, M., et al. 2015. Localization and expression of GABA transporters in the suprachiasmatic nucleus. *Eur. J. Neurosci.* 42: 3018-3032.
- Fu, C.Y., et al. 2015. Nefiracetam attenuates pro-inflammatory cytokines and GABA transporter in specific brain regions of rats with post-ischemic seizures. *Cell. Physiol. Biochem.* 37: 2023-2031.
- Li, W., et al. 2020. Effects of combined bushen zhichan recipe and levodopa in a rodent model of Parkinson disease: potential mechanisms. *Med. Sci. Monit.* 26: e922345.
- Lacaille, H., et al. 2021. Preterm birth alters the maturation of the GABAergic system in the human prefrontal cortex. *Front. Mol. Neurosci.* 14: 827370.

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.