

GABA_A R α 1-6 (E-8): sc-376282

BACKGROUND

GAD-65 and GAD-67, glutamate decarboxylases, function to catalyze the production of GABA (γ -aminobutyric acid). In the central nervous system GABA functions as the main inhibitory transmitter by increasing a Cl⁻ 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. Members of the GABA_A receptor family include GABA_A R α 1-6, GABA_A R β 1-3, GABA_A R γ 1-3, GABA_A R δ , GABA_A R ϵ , GABA_A R ρ 1 and GABA_A R ρ 2. The GABA_B family is composed of GABA_B R1 α and GABA_B R1 β . 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). The GABA transporters function to terminate GABA action.

SOURCE

GABA_A R α 1-6 (E-8) is a mouse monoclonal antibody raised against amino acids 157-456 mapping near the C-terminus of GABA_A R α 1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GABA_A R α 1-6 (E-8) is available conjugated to agarose (sc-376282 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376282 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376282 PE), fluorescein (sc-376282 FITC), Alexa Fluor[®] 488 (sc-376282 AF488), Alexa Fluor[®] 546 (sc-376282 AF546), Alexa Fluor[®] 594 (sc-376282 AF594) or Alexa Fluor[®] 647 (sc-376282 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-376282 AF680) or Alexa Fluor[®] 790 (sc-376282 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

GABA_A R α 1-6 (E-8) is recommended for detection of GABA_A R α 1, GABA_A R α 2, GABA_A R α 3, GABA_A R α 4, GABA_A R α 5 and GABA_A R α 6 of mouse, rat and human 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GABA_A R α 1-6 (E-8) is also recommended for detection of GABA_A R α 1, GABA_A R α 2, GABA_A R α 3, GABA_A R α 4, GABA_A R α 5 and GABA_A R α 6 in additional species, including equine, canine, bovine and porcine.

Molecular Weight of GABA_A R α 1-6: 51 kDa.

Positive Controls: JAR cell lysate: sc-2276, GABA_A R α 1 (h): 293T Lysate: sc-171608 or IMR-32 cell lysate: sc-2409.

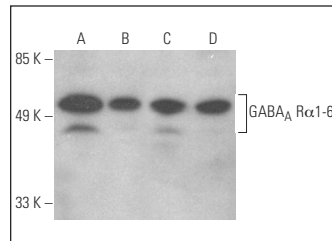
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

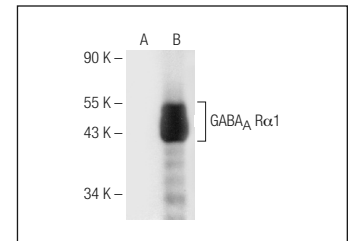
RESEARCH USE

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

DATA



GABA_A R α 1-6 (E-8) HRP: sc-376282 HRP. Direct western blot analysis of GABA_A R α 1-6 expression in Jurkat (A), Ramos (B), IMR-32 (C) and JAR (D) whole cell lysates.



GABA_A R α 1-6 (E-8): sc-376282. Western blot analysis of GABA_A R α 1 expression in non-transfected: sc-117752 (A) and human GABA_A R α 1 transfected: sc-171608 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Arcego, D.M., et al. 2018. Impact of high-fat diet and early stress on depressive-like behavior and hippocampal plasticity in adult male rats. *Mol. Neurobiol.* 55: 2740-2753.
- Couto-Pereira, N.S., et al. 2019. Resilience and vulnerability to trauma: early life interventions modulate aversive memory reconsolidation in the dorsal hippocampus. *Front. Mol. Neurosci.* 12: 134.
- Farajdokht, F., et al. 2020. The role of hippocampal GABA_A receptors on anxiolytic effects of *Echium amoenum* extract in a mice model of restraint stress. *Mol. Biol. Rep.* 47: 6487-6496.
- Soltani Zangbar, H., et al. 2020. A potential entanglement between the spinal cord and hippocampus: θ rhythm correlates with neurogenesis deficiency following spinal cord injury in male rats. *J. Neurosci. Res.* 98: 2451-2467.
- Soltani Zangbar, H., et al. 2021. Hippocampal neurodegeneration and rhythms mirror each other during acute spinal cord injury in male rats. *Brain Res. Bull.* 172: 31-42.
- Su, Q., et al. 2021. Inhibition of maternal c-Src ameliorates the male offspring hypertension by suppressing inflammation and neurotransmitters in the paraventricular nucleus. *Cardiovasc. Toxicol.* 21: 820-834.
- Lacaille, H., et al. 2021. Preterm birth alters the maturation of the GABAergic system in the human prefrontal cortex. *Front. Mol. Neurosci.* 14: 827370.
- Wu, M.Y., et al. 2022. Cranial irradiation impairs intrinsic excitability and synaptic plasticity of hippocampal CA1 pyramidal neurons with implications for cognitive function. *Neural Regen. Res.* 17: 2253-2259.

PROTOCOLS

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