

GlyR β (D-8): sc-365819

BACKGROUND

In the central nervous system (CNS), glycine-mediated inhibitory neurotransmission is essential to voluntary motor control and reflex responses. Glycine binds to glycine receptors (GlyR) in the postsynaptic neuronal membranes. GlyR, γ -aminobutyric acid, serotonin and acetylcholine comprise an evolutionarily conserved superfamily of ligand-gated ion channels. The pentameric subunit structure of GlyR consists of two types of glycosylated membrane proteins, α 1 through α 4 and β , and an associated peripheral membrane protein, which combine to form a chloride-selective ion channel. In humans, the composition of the pentamer changes from α 2 subunits in the fetal CNS to α 1 and β subunits in the adult CNS. Fast potentiation of GlyR by intracellular Ca^{2+} in the brainstem and midbrain indicate an important role for Ca^{2+} in modulation of glycinergic synapses.

REFERENCES

- Pfeiffer, F., et al. 1981. Solubilisation of the glycine receptor from rat spinal cord. *Brain Res.* 226: 273-279.
- Pfeiffer, F., et al. 1982. Purification by affinity chromatography of the glycine receptor of rat spinal cord. *J. Biol. Chem.* 257: 9389-9393.
- Genningloh, G., et al. 1987. The strychnine-binding subunit of the glycine receptor shows homology with nicotinic acetylcholine receptors. *Nature* 328: 215-220.

CHROMOSOMAL LOCATION

Genetic locus: GLRB (human) mapping to 4q32.1; Glrb (mouse) mapping to 3 E3.

SOURCE

GlyR β (D-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 412-441 near the C-terminus of GlyR β 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.

GlyR β (D-8) is available conjugated to agarose (sc-365819 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365819 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365819 PE), fluorescein (sc-365819 FITC), Alexa Fluor[®] 488 (sc-365819 AF488), Alexa Fluor[®] 546 (sc-365819 AF546), Alexa Fluor[®] 594 (sc-365819 AF594) or Alexa Fluor[®] 647 (sc-365819 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-365819 AF680) or Alexa Fluor[®] 790 (sc-365819 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365819 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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RESEARCH USE

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

APPLICATIONS

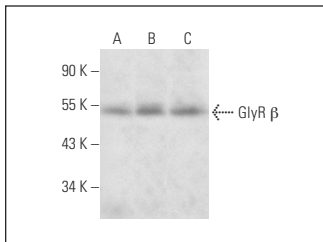
GlyR β (D-8) is recommended for detection of GlyR β of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GlyR β siRNA (h): sc-42471, GlyR β siRNA (m): sc-42472, GlyR β shRNA Plasmid (h): sc-42471-SH, GlyR β shRNA Plasmid (m): sc-42472-SH, GlyR β shRNA (h) Lentiviral Particles: sc-42471-V and GlyR β shRNA (m) Lentiviral Particles: sc-42472-V.

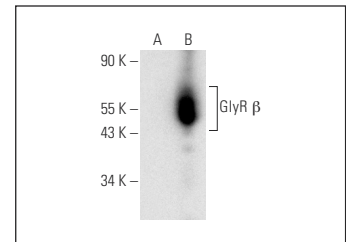
Molecular Weight of GlyR β : 58 kDa.

Positive Controls: GlyR β (h): 293T Lysate: sc-115142, Raji whole cell lysate: sc-364236 or Y79 cell lysate: sc-2240.

DATA



GlyR β (D-8): sc-365819. Western blot analysis of GlyR β expression in Raji (A), Y79 (B) and SH-SY5Y (C) whole cell lysates.



GlyR β (D-8): sc-365819. Western blot analysis of GlyR β expression in non-transfected: sc-117752 (A) and human GlyR β transfected: sc-115142 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Zhou, W., et al. 2016. Expression of glycine receptors and gephyrin in rat medial vestibular nuclei and flocculi following unilateral labyrinthectomy. *Int. J. Mol. Med.* 38: 1481-1489.
- Yu, H., et al. 2021. Characterization of the subunit composition and structure of adult human glycine receptors. *Neuron* 109: 2707-2716.e6.
- Aboheimed, G.I., et al. 2022. Clinical, genetic, and functional characterization of the glycine receptor β -subunit A455P variant in a family affected by hyperekplexia syndrome. *J. Biol. Chem.* E-published.

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 for detailed protocols and support products.