Technical Data Sheet

Purified Mouse Anti-Gephyrin

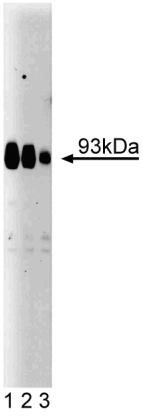
Product Information

Material Number:	**610584**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	45/Gephyrin
Immunogen:	Rat Gephyrin aa. 569-726
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Rat Tested in Development: Chicken, Human, Mouse
Target MW:	93 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

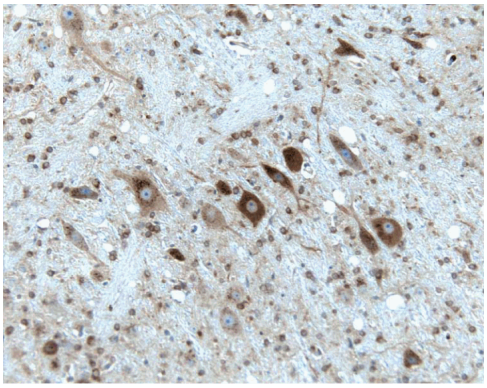
Description

The sub-membraneous region of the postsynaptic neuron is an intricate network of cytoskeletal elements generally known as the postsynaptic density. It is thought that this elaborate cytoskeletal region is critical for receptor targeting, clustering, and efficient signal input. Gephyrin, a 93 kDa protein, was identified as a result of its ability to bind to polymerized tubulin (microtubules). Although expressed in all tissues, *gephyrin* mRNA is found most abundantly in brain. Alternative splicing produces at least five different mRNAs. Gephyrin colocalizes and interacts with the glycine receptor at the postsynaptic density. It is possible that Gephyrin acts as an anchor between the glycine receptor and microtubules.

This antibody is routinely tested by western blot analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



Western blot analysis of Gephyrin on rat brain lysate. *Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of anti-Gephyrin.*



Rat cerebellum, formalin-fixed paraffin embedded tissue, with citrate pre-treatment, 20X.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20° C.

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Application Notes

Application

Western blot	Routinely Tested
Immunoprecipitation	Tested During Development
Immunofluorescence	Tested During Development
Immunohistochemistry	Tested During Development

Suggested Companion Products

Catalog Number	Name	Size	Clone
611464	Rat Cerebellum Lysate	500 µg	(none)
554001	FITC Goat Anti-Mouse Igs (Multiple Adsorption)	0.5 mg	Polyclonal
554002	HRP Goat Anti-Mouse Igs	1.0 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

References

Feng G, Tintrup H, Kirsch J, et al. Dual requirement for gephyrin in glycine receptor clustering and molybdoenzyme activity. *Science*. 1998; 282(5392):1321-1324. (Clone-specific: Western blot)

Kneussel M, Haverkamp S, Fuhrmann JC, et al. The gamma-aminobutyric acid type A receptor (GABAAR)-associated protein GABARAP interacts with gephyrin but is not involved in receptor anchoring at the synapse. *Proc Natl Acad Sci U S A*. 2000; 97(15):8594-8599.(Clone-specific: Immunofluorescence, Western blot)

Meyer G, Kirsch J, Betz H, Langosch D. Identification of a gephyrin binding motif on the glycine receptor beta subunit. *Neuron*. 1995; 15(3):563-572.(Biology)

Prior P, Schmitt B, Grenningloh G, et al. Primary structure and alternative splice variants of gephyrin, a putative glycine receptor-tubulin linker protein. *Neuron*. 1992; 8(6):1161-1170.(Biology)

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