

Anti-Gephyrin Antibody

Our Anti-Gephyrin rabbit polyclonal primary antibody from PhosphoSolutions is produced in-house. It
Catalog # AN1412

Product Information

Application	WB
Primary Accession	Q03555
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	83266

Additional Information

Gene ID	64845
Other Names	Domain E antibody, Domain G antibody, GEPH antibody, GEPH_HUMAN antibody, GPH antibody, GPHN antibody, GPHRYN antibody, KIAA1385 antibody, Molybdopterin molybdenumtransferase antibody, MPT adenylyltransferase antibody, MPT Mo-transferase antibody
Target/Specificity	In neuronal tissue, gephyrin is a scaffolding protein that self assembles in a complex, flat submembraneous lattice that inhibits mobility of the glycine receptors (GlyR) and GABA-A receptors (GABA-A-R) causing clustering at post synaptic sites (Groeneweg et al, 2018). In non-neuronal tissue gephyrin plays a critical role in the molybdendum cofactor (MoCo) biosynthesis of essential life molybdoenzymes, like sulphite oxidase (Groeneweg et al, 2018). Three functional domains have been identified in gephyrin: the stable, structural G and E domains, and the C domain which is intrinsically unstructured leading to multiple isoforms (108, 105, 102, 98, 90 kDa) (Kawasaki, et al 1997). The 93 kDa protein predominantly expressed in the brain and located in the plasma membrane, has a 10X stronger affinity for the GlyR than the GABA-A-R. Gephyrin's flexibility to change its size and molecular density is directly correlated to its high affinity to the GlyR-β subunit, and is required for anchoring and accurate clustering of GlyRs at post synaptic sites and microtubule transport chains (Greoneweg et al, 2018). A consistent parameter in the pathogenesis of Alzheimers Disease shows a decrease of inhibitory GABAergic synapses and gephyrin, and increased levels of an insoluble 37 kDa gephyrin fragment not detected in healthy, non-AD models (Kiss et al, 2016).
Dilution	WB~~1:1000
Format	Antigen Affinity Purified from Serum
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Anti-Gephyrin Antibody is for research use only and not for use in diagnostic

or therapeutic procedures.

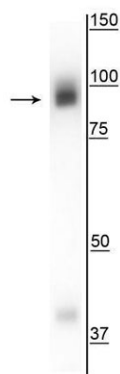
Shipping

Blue Ice

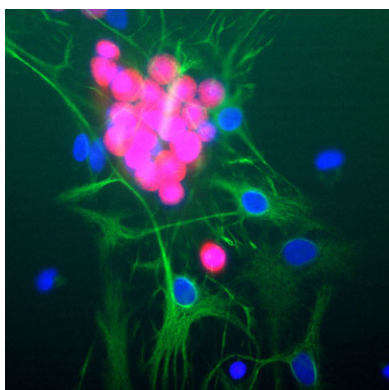
Background

In neuronal tissue, gephyrin is a scaffolding protein that self assembles in a complex, flat submembraneous lattice that inhibits mobility of the glycine receptors (GlyR) and GABA-A receptors (GABA-A-R) causing clustering at post synaptic sites (Groeneweg et al, 2018). In non-neuronal tissue gephyrin plays a critical role in the molybdendium cofactor (MoCo) biosynthesis of essential life molybdoenzymes, like sulphite oxidase (Groeneweg et al, 2018). Three functional domains have been identified in gephyrin: the stable, structural G and E domains, and the C domain which is intrinsically unstructured leading to multiple isoforms (108, 105, 102, 98, 90 kDa) (Kawasaki, et al 1997). The 93 kDa protein predominantly expressed in the brain and located in the plasma membrane, has a 10X stronger affinity for the GlyR than the GABA-A-R. Gephyrin's flexibility to change its size and molecular density is directly correlated to its high affinity to the GlyR- β subunit, and is required for anchoring and accurate clustering of GlyRs at post synaptic sites and microtubule transport chains (Greoneweg et al, 2018). A consistent parameter in the pathogenesis of Alzheimers Disease shows a decrease of inhibitory GABAergic synapses and gephyrin, and increased levels of an insoluble 37 kDa gephyrin fragment not detected in healthy, non-AD models (Kiss et al, 2016).

Images



Western blot of rat hippocampal lysate showing specific immunolabeling of the ~93 kDa gephyrin protein.



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.