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Product Datasheet

Anti-Gephyrin Antibody FL594 Conjugate

Overview

Catalog #	75-444-FL594
Conjugate	FL594 Ex: 594 nm, Em: 615 nm
Isotype	IgG2a
Clone Number	L106/93
Size	200 µL
Concentration	0.5 mg/mL
Host Species	Mouse Monoclonal
Format	Purified by Protein A chromatography
Buffer	PBS with 0.09% azide
Applications	ICC, IHC
Species Reactivity	Human, Mouse, and Rat
Immunogen	Fusion protein amino acids 1-181 (N-terminus) of human Gephyrin (accession number Q9NQX3) produced recombinantly in E. Coli
Molecular Weight	80 kDa
Cite this Antibody	Antibodies Inc Cat# 75-444-FL594, RRID: AB_2940478

Details

Target Description

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 GABAA receptors (GABAAR) 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 GABAAR. 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).

Specificity	No cross-reactivity reported
Purification Method	Produced by in vitro bioreactor culture of hybridoma line followed by Protein A affinity chromatography and conjugation of purified mAb. Purified mAbs are >90% specific antibody.
Quality Control Tests	Each new lot of antibody is quality control tested by western blot on rat whole brain lysate and confirmed to stain the expected molecular weight band.
Storage	Aliquot and store at ≤ -20°C for long term storage. For short term storage, store at 2-8°C. For maximum recovery of product, centrifuge the vial prior to removing the cap.

Our Guarantee

As an original manufacturer, we are dedicated to creating quality and reproducible antibodies that further your research. We provide personalized customer support from the scientists that made the antibody and offer a free replacement or 100% refund if we cannot resolve an issue. Order today and experience our 50+ year passion for science.