Data Sheet (Cat.No.TMAY-00539)

TargetMol

Anti-FKBP12 Antibody (5F45)

Product Details

Ig Type:	Mouse IgG1
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	5F45
Purification:	Protein A

Applications

Verified Activity:	Anti-FKBP1A mouse monoclonal antibody at 1:500 dilution. -Lane A: SH-SY5Y Whole Cell lysate. -Lysates/proteins at 30 µg per lane. -Secondary -Goat Anti-Mouse IgG H&L (Dylight800) at 1/15000 dilution. -Developed using the Odyssey technique. -Performed under reducing conditions. -Predicted band size:12 kDa. -Observed band size:15 kDa
Application:	ELISA,WB
Recommended	WB: 1:500-1:2000; ELISA: 1:1000-1:2000

Properties

Stability & Storage:	Store at 2°C-8°C for 1 month. Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles. Preservative-Free.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	Recombinant Protein: Human FKBP1A protein (TMPY-00808)
Antigen Species:	Human
Synonyms:	FKBP12;FK506 binding protein 1A;Fkbp1;Fkbp
Biology Area:	Phosphatases and Regulators

Research Background

FK506 binding protein 12 (FKBP12), also known as FKBP1, along with cyclophilin, are two major members of the immunophilin protein family who serve as receptors for the immunosuppressant drugs cyclosporin A and FK506. As a conserved molecule in many eukaryotes, FKBP12 has been characterized as a peptidyl-prolyl isomerase that catalyzes the transition between cis- and trans-proline residues, and is involved in several biochemical processes including protein folding, receptor signaling, protein trafficking and transcription. FKBP12 has attracted immense attention and its role in mediating the immunosuppressive functions. FKBP12 serves a dual role as a peptidyl-prolyl cis-trans isomerase and as a modulator of several cell signaling pathways. In one such role, FKBP12 interacts with and regulates the functional state of the ryanodine Ca2+ channel receptor by altering protein conformation and coordinating multi-protein complex formation. Another physiological role of FKBP12 is an interactor and a regulator

of the type I serine/threonine kinase receptors of TGF-beta superfamily. Current data, derived from detailed biochemical studies as well as from functional studies in various systems, suggest that FKBP12 functions as a "guardian" for the type I receptors to prevent them from leaky signaling under sub-optimal ligand concentrations, thereby providing a molecular "gradient reader" for TGF-beta family morphogens. This aspect of FKBP12 function may be critical for cellular responsiveness to morphogenetic gradients of the TGF-beta family members during early development, serving to assure the translation of different ligand concentrations into different signaling readouts. In addition, FKBP12 may be involved in neuronal or astrocytic cytoskeletal organization and the abnormal metabolism of tau protein in Alzheimer's disease (AD) damaged neurons.

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