

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human FKBP12.6 in direct ELISAs. Detects human, mouse, and rat FKBP12 and FKBP12.6 in Western blots.
Source	Monoclonal Rat IgG _{2B} Clone # 426227
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human FKBP12.6 Gly2-Glu108 Accession # P68106
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

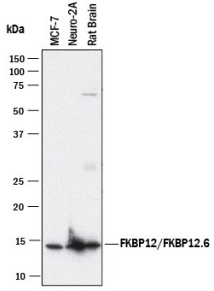
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunohistochemistry	5-25 µg/mL	See Below

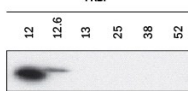
DATA

Western Blot



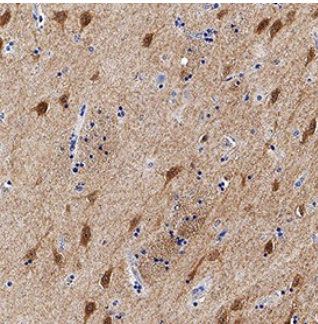
Detection of Human, Mouse, and Rat FKBP12 and FKBP12.6 by Western Blot. Western blot shows lysates of MCF-7 human breast cancer cell line, Neuro-2A mouse neuroblastoma cell line, and rat brain tissue. PVDF membrane was probed with 1 µg/mL of Rat Anti-Human/Mouse/Rat FKBP12/FKBP12.6 Monoclonal Antibody (Catalog # MAB4174) followed by HRP-conjugated Anti-Rat IgG Secondary Antibody (Catalog # HAF005). A specific band was detected for FKBP12 and FKBP12.6 at approximately 12 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Western Blot



Specificity of FKBP12 and FKBP12.6 Shown by Western Blot. Western blot shows recombinant human FKBP 12, recombinant human FKBP 13, recombinant human FKBP 25, recombinant human FKBP 38, and recombinant human FKBP 52. PVDF membrane was probed with 1 µg/mL of Rat Anti-Human/Mouse/Rat FKBP12/FKBP12.6 Monoclonal Antibody (Catalog # MAB4174) followed by HRP-conjugated Anti-Rat IgG Secondary Antibody (Catalog # HAF005). A specific band was detected for FKBP12 and FKBP12.6 at approximately 12 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



FKBP12 and FKBP12.6 in Human Brain. FKBP12 and FKBP12.6 was detected in immersion fixed paraffin-embedded sections of human brain (caudate putamen) using Rat Anti-Human/Mouse/Rat FKBP12/FKBP12.6 Monoclonal Antibody (Catalog # MAB4174) at 5 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Rat IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC005). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm in neurons. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

FK506 binding protein, 12.6 kDa molecular weight (FKBP12.6), also called FKBP1B, is a peptidyl-prolyl isomerase that catalyzes the transition between *cis*- and *trans*-proline residues critical for proper folding of proteins. The immunosuppressant FK506 is a potent inhibitor of FKBP12.6. FKBP12.6 is localized in the sarcoplasmic reticulum associated with the Ryanodine receptor RYR2. PKA-induced phosphorylation of RYR2 causes FKBP12.6 dissociation. In heart failure, RYR2 is hyperphosphorylated and has low levels of FKBP12.6 bound to it. Male FKBP12.6 knockout mice have cardiac hypertrophy and lethal exercise arrhythmias.