

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse, and rat Cyclophilin B in Western blots. In Western blots, no cross-react with recombinant human Cyclophilin A is observed. Detection of mouse and rat Cyclophilin B has not been tested in Immunocytochemistry.
Source	Monoclonal Mouse IgG _{2A} Clone # 549205
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Cyclophilin B Asp34-Glu216 Accession # P23284
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 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
Immunocytochemistry	8-25 µg/mL	See Below

DATA

<p>Western Blot</p>	<p>Detection of Human/Mouse/Rat Cyclophilin B by Western Blot. Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line, A431 human epithelial carcinoma cell line, BaF3 mouse pro-B cell line, PC-12 rat adrenal pheochromocytoma cell line, Rat-2 rat embryonic fibroblast cell line, and NRK rat normal kidney cell. PVDF membrane was probed with 1 µg/mL Mouse Anti-Human/Mouse/Rat Cyclophilin B Monoclonal Antibody (Catalog # MAB5410) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). For additional reference, recombinant human Cyclophilin A and Cyclophilin B (5 ng/lane) were included. A specific band for Cyclophilin B was detected at approximately 24 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 3.</p>	<p>Immunocytochemistry</p> <p>Cyclophilin B in HeLa Human Cell Line. Cyclophilin B was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Mouse Anti-Human/Mouse/Rat Cyclophilin B Monoclonal Antibody (Catalog # MAB5410) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.</p>
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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	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <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

Cyclophilin B (SCYLP, CyPB and peptidyl-prolyl *cis-trans* isomerase B) is a 24 kDa glycoprotein member of the B subfamily of the cyclophilin-type PPIase family of molecules. It is both secreted and retained in the ER. When secreted, Cyclophilin B mediates chemotaxis and T cell adhesion to fibronectin. This is likely due to its prolyl *cis/trans* isomerase activity. Intracellularly, Cyclophilin B appears to serve as a molecular chaperone for molecules destined for secretion. It does so via stabilization, and facilitating the activity of additional chaperones. The human Cyclophilin B precursor is 216 amino acids (aa) in length. It contains a 25 aa signal sequence plus a 191 aa mature region. There is a partial heparin-binding sequence (aa 27-34), a PPIase domain (aa 47-204) and a C-terminal ER retention motif (aa 213-216). Over aa 34-216, the human and mouse sequences are 95% aa identical.