

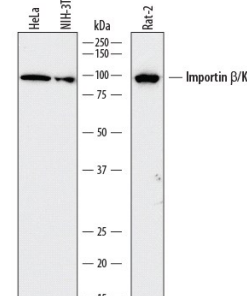
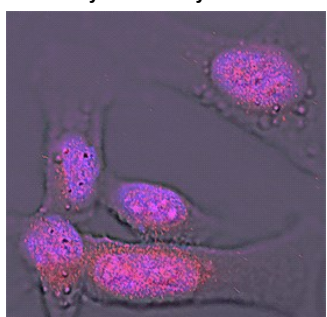
DESCRIPTION	
<b>Species Reactivity</b>	Human/Mouse/Rat
<b>Specificity</b>	Detects human Importin $\beta$ /KPNB1 in ELISA and Western Blot. It detects mouse and rat Importin $\beta$ /KPNB1 in Western Blots.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 845208
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human Importin $\beta$ /KPNB1 Met1-Gly155 Accession # Q14974
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 $\mu$ m 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
<b>Western Blot</b>	1 $\mu$ g/mL	See Below
<b>Immunocytochemistry</b>	8-25 $\mu$ g/mL	See Below

## DATA

<p><b>Western Blot</b></p>  <p><b>Detection of Human, Mouse, and Rat Importin <math>\beta</math>/KPNB1 by Western Blot.</b> Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line, NIH-3T3 mouse embryonic fibroblast cell line, and Rat-2 rat embryonic fibroblast cell line. PVDF membrane was probed with 1 <math>\mu</math>g/mL of Mouse Anti-Human Importin <math>\beta</math>/KPNB1 Monoclonal Antibody (Catalog # MAB8209) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for Importin <math>\beta</math>/KPNB1 at approximately 97 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p><b>Immunocytochemistry</b></p>  <p><b>Importin <math>\beta</math>/KPNB1 in HeLa Human Cell Line.</b> Importin <math>\beta</math>/KPNB1 was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Mouse Anti-Human Importin <math>\beta</math>/KPNB1 Monoclonal Antibody (Catalog # MAB8209) at 25 <math>\mu</math>g/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 nuclei. View our protocol for <a href="#">Fluorescent ICC Staining of Cells on Coverslips</a>.</p>
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## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

KPNB1 (Karyopherin subunit beta 1), also called Importin  $\beta$ 1, NTF97 (nuclear transport factor, 97 kDa) or PTAC97 (pore targeting complex, 97 kDa), is a member of the Importin b family of proteins. It is ubiquitously expressed and plays many roles in the nucleus. Primarily, KPNB1 transports various complexes from cytoplasm into nucleus, either alone or with a KPNA adaptor. The 876 amino acid (aa) human KPNB1 contains an N-terminal IBB/Importin b domain (aa 21-101), and eight HEAT (solenoid) domains (aa 124-726). A 731 aa splice variant begins with Met146, while an 845 aa variant shows a 2 aa substitution for aa 702-734. Binding sites for adaptors and for its regulator, Ran-GTP, overlap within the HEAT domains. Human KPNB1 aa 1-155 shares 99% and 97% aa sequence identity with mouse and rat KPNB1, respectively.