

## DESCRIPTION

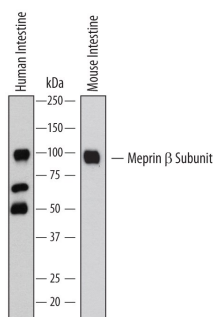
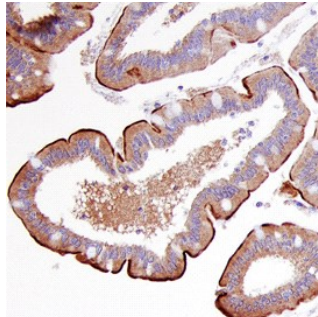
<b>Species Reactivity</b>	Human/Mouse
<b>Specificity</b>	Detects the pro form of human or mouse Meprin $\beta$ Subunit/MEP1B in Western blots. It does not react with the mature form.
<b>Source</b>	Monoclonal Rat IgG <sub>1</sub> Clone # 289731
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Human embryonic kidney cell line HEK293-derived recombinant human Meprin $\beta$ Subunit/MEP1B Thr23-Ser293 Accession # Q16820
<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>Immunohistochemistry</b>	8-25 $\mu$ g/mL	See Below

## DATA

Western Blot	Immunohistochemistry
 <p><b>Detection of Human and Mouse Meprin <math>\beta</math> Subunit/MEP1B by Western Blot.</b> Western blot shows lysates of human intestine tissue and mouse intestine tissue. PVDF membrane was probed with 1 <math>\mu</math>g/mL of Rat Anti-Human/Mouse Meprin <math>\beta</math> Subunit/MEP1B Monoclonal Antibody (Catalog # MAB28951) followed by HRP-conjugated Anti-Rat IgG Secondary Antibody (Catalog # HAF005). A specific band was detected for Meprin <math>\beta</math> Subunit/MEP1B at approximately 97 kDa (as indicated). This experiment was conducted under reducing conditions and using <a href="#">Immunoblot Buffer Group 1</a>.</p>	 <p><b>Meprin <math>\beta</math> Subunit/MEP1B in Human Intestine.</b> Meprin <math>\beta</math> Subunit/MEP1B was detected in immersion fixed paraffin-embedded sections of human intestine using Human/Mouse Meprin <math>\beta</math> Subunit/MEP1B Monoclonal Antibody (Catalog # MAB28951) at 1 <math>\mu</math>g/mL overnight at 4 °C. 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 the Anti-Rat HRP-DAB Cell &amp; Tissue Staining Kit (brown; Catalog # CTS017) and counterstained with hematoxylin (blue). Specific staining was localized to the Brush border of epithelial cells. View our protocol for <a href="#">Chromogenic IHC Staining of Paraffin-embedded Tissue Sections</a>. This application has not been tested in mouse samples</p>

## 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

Meprins are multimeric proteases composed of  $\alpha$  and  $\beta$  subunits, which are members of the astacin family of zinc endopeptidases (1, 2). Both subunits form disulfide-linked homo- or heterooligomers, which are also referred to as Meprin A (composed of  $\alpha$  subunits with or without  $\beta$  subunits) and Meprin B (composed of  $\beta$  subunits only) (3). Although the two subunits share 42% amino acid (aa) sequence identity, they differ significantly in their oligomeric structure, post-translational processing and subsequently cellular location, and substrate and peptide bond specificity (4). The 701 aa sequence of human Meprin  $\beta$  subunit precursor consists of a signal peptide (aa 1 to 21), a pro region (aa 22 to 61), and a mature chain (aa 62 to 701) containing catalytic (aa 62 to 259), MAM (aa 260 to 429), MATH (aa 430 to 585), EGF-like (aa 604 to 644), transmembrane (aa 653 to 673), and cytoplasmic (aa 674 to 701) domains.

### References:

1. Bond, J.S. and R.J. Beynon (1995) *Protein Sci.* **4**:1247.
2. Stocker, W. *et al.* (1995) *Protein Sci.* **4**:823.
3. Bertenshaw, G.P. *et al.* (2001) *J. Biol. Chem.* **276**:13248.
4. Ishmael, F.T. *et al.* (2005) *J. Biol. Chem.* **280**:13895.