Mouse Meprin β Subunit/MEP1B Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF3300

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Meprin β Subunit/MEP1B in direct ELISAs and Western blots. In Western blots, approximately 40% cross-reactivity with recombinant human MEP1B is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Meprin β Subunit/MEP1B Leu21-Ser594 (Thr75Ile, Ile432Val) Accession # Q61847
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.

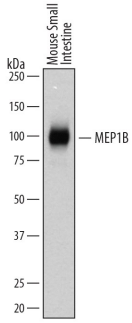
APPLICATIONS

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	0.1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Mouse Meprin β Subunit/MEP1B (Catalog # 3300-ZN), see our available Western blot detection antibodies

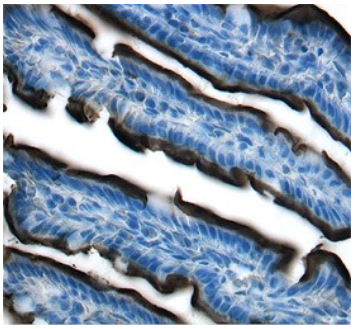
DATA

Western Blot



Detection of Mouse Meprin β Subunit/MEP1B by Western Blot. Western blot shows lysates of mouse small intestine tissue. PVDF membrane was probed with 0.1 µg/mL of Goat Anti-Mouse Meprin β Subunit/MEP1B Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3300) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). A specific band was detected for Meprin β Subunit/MEP1B at approximately 97 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 5.

Immunohistochemistry



Meprin β Subunit/MEP1B in Mouse Intestine. Meprin β Subunit/MEP1B was detected in perfusion fixed frozen sections of mouse intestine using 1 µg/mL Goat Anti-Mouse Meprin β Subunit/MEP1B Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3300) overnight at 4 °C. Tissue was stained with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific labeling was localized to the brush border of intestinal villi.View our protocol for Chromogenic IHC Staining of Frozen Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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.** ● 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

Meprins are multimeric proteases composed of α and β 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 α subunits with or without β subunits) and meprin B (composed of β subunits only) (3). Although the two subunits share 42% identity in their amino acid sequence, they differ significantly in their oligomeric structure, post-translational processing and subsequently cellular location, and substrate and peptide bond specificity (4). The 704 amino acid sequence of mouse meprin β subunit precursor consists of a signal peptide (residues 1-20), a pro region (residues 21-62), and a mature chain (residues 63-704) containing following domains, catalytic (residues 63-260), MAM (residues 261-430), MATH (residues 431-586), EGF-like (residues 607-647), transmembrane (residues 655-678), and cytoplasmic (residues 679-704). The pro enzyme terminating at residue 594 was expressed and the secreted protein purified from conditioned medium. The amino acid sequence has Ile and Val at position 75 and 432 instead of Thr and Ile, respectively. After trypsin treatment, the activated enzyme cleaved a flurogenic peptide, which contains Asp and Glu, the preferred residues found in the P1' and P1 sites (3).

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.

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