

DESCRIPTION

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| Species Reactivity | Mouse |
| Specificity | Detects mouse Meprin α Subunit/MEP1A in direct ELISAs and Western blots. In direct ELISAs, less than 20% cross-reactivity with recombinant human MEP1A is observed and less than 5% cross-reactivity with recombinant mouse MEP1B is observed. |
| Source | Polyclonal Goat IgG |
| Purification | Antigen Affinity-purified |
| Immunogen | <i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant mouse Meprin α Subunit/MEP1A Val34-Arg615 Accession # NP_032611 |
| Formulation | Lyophilized from a 0.2 μ m 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 μ 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 |
|----------------------------|---------------------------|--|
| Western Blot | 0.1 μ g/mL | Recombinant Mouse Meprin α Subunit/MEP1A (Catalog # 4007-ZN) |
| Immunoprecipitation | 25 μ g/mL | Conditioned cell culture medium spiked with Recombinant Mouse Meprin α Subunit/MEP1A (Catalog # 4007-ZN), see our available Western blot detection antibodies |

PREPARATION AND STORAGE

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| 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. <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

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 hetero-oligomers, 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 760 amino acid sequence of mouse meprin α subunit precursor consists of a signal peptide (residues 1-33), a pro region (residues 34-77), and a mature chain (residues 78-760) containing the following domains, catalytic (residues 78-275), MAM (residues 276-445), MATH (residues 447-607), EGF-like (residues 684-724), transmembrane (residues 727-754), and cytoplasmic (residues 755-760) (5). The pro enzyme terminating at residue 615 was expressed and the secreted protein purified from conditioned medium. The molecular masses of recombinant mouse MEP1A are similar to those observed for the α subunit of rat Meprin A (6).

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.
5. Jiang, W. *et al.* (1992) *J. Biol. Chem.* **267**:9185.
6. Bertenshaw, G.P. *et al.* (2003) *J. Biol. Chem.* **278**:2522.