

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Meprin α Subunit/MEP1A in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human MEP1B or recombinant mouse MEP1A is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 364312
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Meprin α Subunit/MEP1A Val22-Gln601 Accession # AAA21338
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	1 μ g/mL	Recombinant Human Meprin α Subunit/MEP1A (Catalog # 3220-ZN)
Immunoprecipitation	25 μ g/mL	Conditioned cell culture medium spiked with Recombinant Human Meprin α Subunit/MEP1A (Catalog # 3220-ZN), see our available Western blot detection antibodies
Intracellular Staining by Flow Cytometry	2.5 μ g/10 ⁶ cells	HEK293 human embryonic kidney cell line fixed with paraformaldehyde and permeabilized with saponin
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

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	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 (aa) sequence, they differ significantly in their oligomeric structure, post-translational processing and subsequently cellular location, and substrate and peptide bond specificity (4). Human Meprin α subunit consists of a signal peptide (aa 1 to 21), a pro region (aa 22 to 65), and a mature chain (aa 66 to 746) containing the following domains: catalytic (aa 62 to 263), MAM (aa 264 to 433), MATH (aa 434 to 593), EGF-like (aa 670 to 710), transmembrane (aa 713 to 740), and cytoplasmic (aa 741 to 746).

References:

1. Bond, J.S. and Beynon, R.J. (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.