

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
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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
Intracellular Staining by Flow Cytometry	0.25-1 μ g/10 ⁶ cells	HEK293 human embryonic kidney cell line fixed with paraformaldehyde and permeabilized with saponin

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

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:

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

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