

**Recombinant Mouse MCPT1 Protein (His tag)**

Cat.NO.: TP07957

3th Edition

**Synonyms:**AV080368;Mcp-1

**Description:** Mast Cell Protease 1 (mMCP-1), also known as MCP-1, MCPT-1 and  $\beta$ -chymase, is a member of the Chymase family of chymotrypsin-like serine proteases. MCPT-1 is a 26 kDa  $\beta$ -chymase that is a component of mast cell granules. It is a 226 amino acid (aa) protein that has a conserved pattern of six cysteines and one potential glycosylation site. The granule-derived mouse mast cell proteases-1 and -2 (mMCP-1 and -2) colocalize in similar quantities in mucosal mast cells but micrograms of mMCP-1 compared with nanograms of mMCP-2 are detected in peripheral blood during intestinal nematode infection. mMCP-1 isolated from serum is complexed with serpins and both the accumulation and the longevity of mMCP-1 in blood is due to complex formation, protecting it from a pathway that rapidly clears mMCP-2, which is unable to form complexes with serpins. The mucosal mast cell (MMC) granule-specific beta-chymase, mouse mast cell protease-1 (mMCP-1), is released systemically into the bloodstream early in nematode infection before parasite-specific IgE responses develop and TGF-beta1 induces constitutive release of mMCP-1 by homologues of MMC in vitro. Expression of mMCP-1 is largely restricted to intraepithelial MMC and is thought to play a role in the regulation of epithelial permeability. Its activation is completed by the removal of a two residue N-terminal propeptide by a dipeptidyl peptidase (Cathepsin C). MCPT-1 is upregulated in the intestine in response to nematode infection, or in systemic mucosa in response to anaphylaxis. Like human  $\beta$ -chymase, MCPT-1 is capable of the conversion of angiotensin I to angiotensin II, which plays a key role in the regulation of arterial pressure. The intestinal inflammation associated with gastrointestinal helminths is partly mediated by mMCP-1.

**Form:**PBS**Molecular Weight:**26.8 kDa**Sequences:**Met 1-Lys 246**Purity:**> 95% by HPLC**Concentration:****Endotoxin Level:**<1.0 EU per 1 ug of protein (determined by LAL method)**Storage:**Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.