

Product datasheet for **AM32952PU-N**

MASP1 Rat Monoclonal Antibody [Clone ID: 38:12-3b]

Product data:

Product Type:	Primary Antibodies
Clone Name:	38:12-3b
Applications:	ELISA, WB
Recommended Dilution:	Immuno Assays (Detector). Western blot. The typical starting working dilution is 1/50.
Reactivity:	Human
Host:	Rat
Isotype:	IgG2a
Clonality:	Monoclonal
Immunogen:	Purified MASP-3
Specificity:	The monoclonal antibody 38:12-3 recognizes MASP-3, a 94 kDa mannan-binding lectin (MBL)-associated serine protease. The monoclonal antibody 38:12-3 does not recognize MASP-1.
Formulation:	PBS State: Purified State: Liquid 0.2 µm filtered Ig fraction Stabilizer: 0.1% BSA Preservative: 0.02% Sodium Azide
Concentration:	lot specific
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C. DO NOT FREEZE!
Stability:	Shelf life: one year from despatch.
Gene Name:	mannan binding lectin serine peptidase 1
Database Link:	Entrez Gene 5648 Human P48740



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Background:

Three pathways of complement activation have been reported: the antibody-dependent classical pathway, the antibody-independent alternative pathway and the lectin pathway. Activation of each pathway involves formation of serine protease complexes, which results in activation of the central complement component, C3. In the lectin pathway, mannose-binding-lectin (MBL)-associated serine proteases (MASP) form complexes with oligopolymeric lectin molecules, which are involved in pattern recognition. Upon binding of the recognition molecules to carbohydrates on the surface of microorganisms, MASPs are converted to their active forms and initiate complement activation. Six members of the family of MASP-like serine proteases have been reported: MASP-1, MASP-2, MASP-3, Map19, C1r and C1s. These products show identical domain organization, even though the overall amino acid sequence identity is only approximately 40%. Each MASP-type forms homodimers and is individually associated with MBL and the ficolins in a Ca²⁺-dependent manner. The four MBL-associated proteins are generated from only two genes, the MASP-1/3 gene encodes MASP-1 and MASP-3, whereas the MASP-2/Map19 gene gives rise to MASP-2 and the non-enzymatic MASP-2 MAP19. MASP-1 associates preferentially with low oligomer MBL (termed MBL-I), whereas MASP-2 and MASP-3 associate mainly with larger MBL oligomers (MBL II and MBL III). MASP-3 is generated by alternative splicing of the MASP-1/3 gene. The MASP-3 transcription product is composed of an A chain, which is common to both MASP-1 and MASP-3, and a B chain, which is unique to MASP-3. The biological function of MASP-3 remains unclear. However, MASP-3 was found to downregulate the C4 and C2 cleaving activity of MASP-2. MASP-3 inhibits MASP-2 by a combination of competitive inhibition of MASP-2 association with MBL and inhibition of activation of the MBL-associated MASP-2.

Synonyms:

Mannose-, Mannan-binding lectin serine protease 1, Complement factor MASP-3, Serine protease 5, MASP1, CRARF, CRARF1, PRSS5