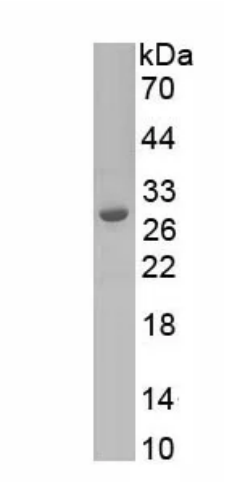
Active Mannose Associated Serine Protease 2 (MASP2)

Catalog#:PEH12537

概述（Summary）

别称（Alternative Names）	Mannose-binding protein-associated serine protease 2; mannan-Binding Lectin Serine Peptidase 2; MBL-associated serine protease 2
纯度（Purity）	Greater than 97% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Ile445-Ile683】
Accession #	O00187
表达宿主（Host）	E.coli
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	27.4 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Serum protease that plays an important role in the activation of the complement system via mannose-binding lectin. After activation by auto-catalytic cleavage it cleaves C2 and C4, leading to their activation and to the formation of C3 convertase.

电泳图（SDS-PAGE image）



Greater than 97% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

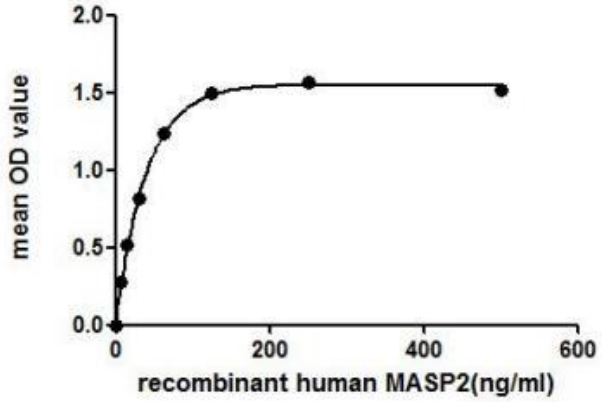


Figure 1. The binding activity of MASP2 with MBL2.

MASP2 (Mannan-binding lectin serine protease 2) is a serum protease that plays an important role in the activation of the complement system via mannose-binding lectin. The preproprotein of MASP2 is proteolytically processed to generate A and B chains that heterodimerize to form the mature protease, which is able to associate with MBL2. Thus, a functional binding ELISA assay was constructed to detect the association of rhMASP2 with MBL2. Briefly, rhMASP-2 were diluted serially in 10mM Tris-HCl, 1M NaCl, 5mM CaCl2, and 0.05%Triton X-100 (pH 7.4). Duplicate samples of 100uL were then transferred to MBL2-coated microtiter wells and incubated for 2h at 37oC. Wells were washed with PBST and incubated for 1h with anti-MASP-2 pAb, then aspirated and washed 3 times. After incubation with HRP labeled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution , wells were incubated for 15-25 minutes at 37oC. Finally, add 50μL stop solution to the wells and read at 450nm immediately. The binding activity of MASP2 with MBL2 was shown in Figure 1 and this effect was in a dose dependent manner. The activity of MASP2 was also measured by its ability to cleaves a thioester substrate Z-Lys-SBzl•HCl. The reaction was performed in 0.05 M Tris, pH 8.5 (assay buffer), initiated by addition 50 μL of various concentrations of MASP2 (diluted by assay buffer) to 50 μL of substrate and DTNB mixture (equal volumes mixed by 0.4 mM substrate and 0.4 mM DTNB). The final well serves as a negative control with no MASP2, replaced with 50 μL assay buffer. Incubated at 25℃ for 5min, then read at a wavelength of 405 nm. The specific activity of recombinant human MASP2 is >30 pmol/min/μg.

Specific Activity (pmol/min/ug)=

$$\frac{\text{Adjusted } V_{max}^{*} \text{ (OD/min) x well volume (L) x } 10^{12} \text{ pmol/mol}}{\text{ext. coeff}^{**} \text{ (M}^{-1}\text{cm}^{-1}\text{) x path corr.}^{***} \text{ (cm) x amount of enzyme (ug)}}$$

*Adjusted for Substrate Blank
**Using the extinction coefficient 13260 $M^{-1}cm^{-1}$
***Using the path correction 0.320 cm

注意事项（Note）

For Research Use Only , Not for Diagnostic Use.