Datasheet for ABIN2859302

MBL2 ELISA Kit

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Overview

Quantity:	96 tests
Target:	MBL2
Binding Specificity:	AA 21-248
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	312-20000 pg/mL
Minimum Detection Limit:	312 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human MBP-C
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: NSO Immunogen sequence: E21-I248
Specificity:	Expression system for standard: NSO Immunogen sequence: E21-I248
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity:	<10pg/mL
Material not included:	Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g Nacl

Target Details

Target:	MBL2
Alternative Name:	MBL2 (MBL2 Products)
Background:	Protein Function: Calcium-dependent lectin involved in innate immune defense. Binds mannose, fucose and N-acetylglucosamine on different microorganisms and activates the lectin complement pathway. Binds to late apoptotic cells, as well as to apoptotic blebs and to necrotic cells, but not to early apoptotic cells, facilitating their uptake by macrophages. May bind DNA. . Background: MBL2, also called mannose-binding lectin (protein C) 2, soluble or Mannose-binding lectin (MBL) is a lectin that is instrumental in innate immunity. MBL2 is mapped to chromosome 10q11.2-q21. It belongs to the class of collectins in the C-type lectin superfamily, whose function appears to be pattern recognition in the first line of defense in the pre-immune host. MBL2 recognizes carbohydrate patterns, found on the surface of a large number of pathogenic micro-organisms, including bacteria, viruses, protozoa and fungi. Binding MBL2 to a micro-organism results in activation of the lectin pathway of the complement system. Another important function of MBL2 is that this molecule binds senescent and apoptotic cells and enhances engulfment of whole, intact apoptotic cells, as well as cell debris by phagocytes. Synonyms: Mannose-binding protein C,MBP-C,Collectin-1,MBP1,Mannan-binding protein,Mannose-binding lectin,MBL2,COLEC1, MBL, Full Gene Name: Mannose-binding protein C Cellular Localisation: Secreted.
Gene ID:	4153
UniProt:	P11226
Pathways:	Complement System, Positive Regulation of Immune Effector Process

Application Details

Application Notes:	Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well

Application Details

	assay was recommended for both standard and sample testing.
Comment:	Sequence similarities: Contains 1 C-type lectin domain. Tissue Specificity: Plasma protein produced mainly in the liver. .
Plate:	Pre-coated
Protocol:	human MBP-C ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for MBP-C has been precoated onto 96-well plates. Standards(NSO, E21-I248) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for MBP-C is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the human MBP-C amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 20000pg/mL, 10000pg/mL, 5000pg/mL, 2500pg/mL, 1250pg/mL, 625pg/mL, 312pg/mL human MBP-C standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of human cell culture supernates, serum or plasma(heparin, EDTA) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human MBP-C standard solution and each sample be measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(ng/ml): 2.4, Standard deviation: 0.086, CV(%): 3.6 • Sample 2: n=16, Mean(ng/ml): 7.2, Standard deviation: 0.324, CV(%): 4.5 • Sample 3: n=16, Mean(ng/ml): 11.5, Standard deviation: 0.61, CV(%): 5.3, • Sample 1: n=24, Mean(ng/ml): 3.2, Standard deviation: 0.157, CV(%): 4.9 • Sample 2: n=24, Mean(ng/ml): 6.9, Standard deviation: 0.393, CV(%): 5.7 • Sample 3: n=24, Mean(ng/ml): 10.7, Standard deviation: 0.738, CV(%): 6.9
Restrictions:	For Research Use only

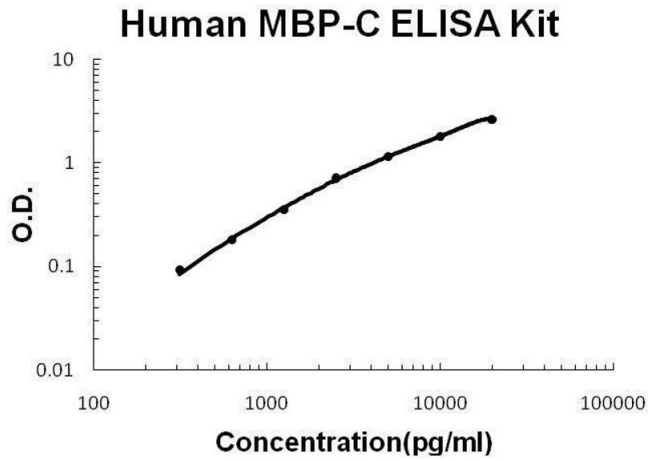
Handling

Handling Advice:	Avoid multiple freeze-thaw cycles.
Storage:	-20 °C,4 °C
Storage Comment:	Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles
Expiry Date:	12 months

Publications

Product cited in: Huang, Lv, Liu, Ye, Yang, Li, Zhu, Wang, Cui, Jiang, Hao, Xu, Jin, Qian: "A SIRPα-Fc fusion protein enhances the antitumor effect of oncolytic adenovirus against ovarian cancer." in: **Molecular oncology**, Vol. 14, Issue 3, pp. 657-668, (2021) (PubMed).

Images



ELISA

Image 1. Human MBP-C/MBL2 PicoKine ELISA Kit standard curve