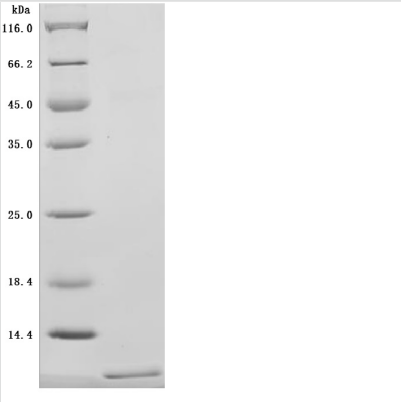
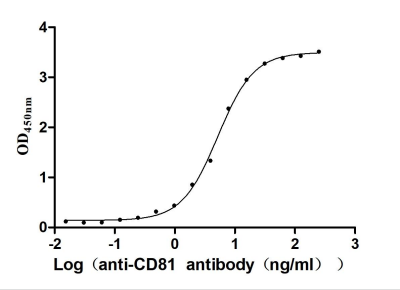
Recombinant Human CD81 antigen (CD81), partial (Active)

Product Code	CSB-MP004960HUd7
Abbreviation	Recombinant Human CD81 protein, partial (Active)
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P60033
Form	Lyophilized powder
Storage Buffer	Lyophilized from a 0.2 μm filtered 20 mM Tris-HCl, 0.5 M NaCl, 6% Trehalose, pH 8.0
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized Human CD81 at 2 μg/mL can bind Anti-CD81 recombinant antibody(CSB-RA004960MA1HU), the EC50 is 4.166-5.578 ng/mL.
Purity	Greater than 95% as determined by SDS-PAGE. Greater than 95% as determined by SEC-HPLC.
Sequence	FVNKDQIAKDVKQFYDQALQQAVVDDDANNAKAVVKTFHETLDCCGSSTLTAL TTSVLKNNLCPSGSNIISNLFKEDCHQKIDDLFSGK
Source	Mammalian cell
Target Names	CD81
Expression Region	113-201aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4? for up to one week.
Tag Info	C-terminal 10xHis-tagged
Mol. Weight	11.1 kDa
Protein Length	Partial
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.



Activity
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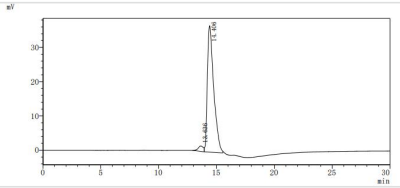

The purity of CD81 was greater than 95% as determined by SEC-HPLC

Description

The gene segment of the human CD81 protein encoding amino acids 113 to 201 is fused with a 10xHis-tag gene at its C-terminus and subsequently integrated into a plasmid vector. This recombinant vector is then introduced into mammalian cells, followed by the selection and cultivation of the transfected cells to induce protein expression. The recombinant human CD81 protein is harvested from the cell lysate, exhibiting a purity exceeding 95% as determined by SDS-PAGE. Its endotoxin level measures below 1.0 EU/μg through the LAL method. Its functionality is confirmed through assessment using a functional ELISA. When immobilized at a concentration of 2 μg/mL, the human CD81 protein is capable of binding with the anti-CD81 recombinant antibody (CSB-RA004960MA1HU), exhibiting an EC_{50} ranging from 4.166 to 5.578 ng/mL.

The human CD81 protein is a tetraspanin membrane protein expressed in various tissues except for red blood cells and platelets. It forms complexes with other tetraspanin proteins, integrins, co-receptors, MHCI or MHCII molecules, influencing the adhesion, morphology, activation, proliferation, and differentiation of B and T cells. CD81 is involved in critical cellular processes such as membrane organization, protein transport, cell fusion, and intercellular interactions. Within the immune system, CD81 regulates immunological synapses, receptor clustering, and signal transduction. It also mediates adaptive and innate immune suppression. CD81 serves as a portal for pathogens like

	hepatitis C virus and malaria parasites into liver cells. CD81 has also been shown to modulate cell migration and invasion, hence its relevance to cancer progression. It's expressed in various types of cancers including breast, lung, prostate, melanoma, brain, and lymphoma, and its overexpression or downregulation is correlated with prognosis. Thus, CD81 presents a rational target for receptor-targeted drugs. Developing CD81 as a drug target protein aids in screening clinical drugs targeting CD81 and conducting clinical trials.
Endotoxin	Less than 1.0 EU/ug as determined by LAL method.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20?/-80?. Our default final concentration of glycerol is 50%. Customers could use it as reference.
Shelf Life	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.