

Human CD47 Protein (ECD,His Tag)

Catalog Number: 12283-H08H



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

IAP; MER6; OA3

Protein Construction:

A DNA sequence encoding the human CD47 (NP_942088.1) (Gln19-Pro139) was expressed with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: ≥ 95 % as determined by SDS-PAGE. ≥ 95 % as determined by SEC-HPLC.

Bio Activity:

1. Measured by its binding ability in a functional ELISA. Immobilized Human SIRP alpha hFc (Cat:11612-H02H1) at 2 µg/ml (100 µl/well) can bind Human CD47 His (Cat:12283-H08H), the EC₅₀ of Human CD47 His is 5.0-25.0 ng/mL.
2. Captured Ligufalimab (IgG4) on proA Chip can bind CD47 (Cat.No.12283-H08H) with an affinity constant of 10.82 nM as determined in a SPR assay (Biacore T200)(Routinely tested).
3. Loaded Hu5F9-G4(IgG4) on ProA Biosensor, can bind human CD47 protein, His Tag (Cat.No.12283-H08H) with an affinity constant of 3.02nM as determined in BLI assay (Sartorius Octet Red384) (Routinely tested).

Endotoxin:

< 1.0 EU per µg protein as determined by the LAL method.

Predicted N terminal: Gln 19

Molecular Mass:

The recombinant human CD47 consists of 132 amino acids and predicts a molecular mass of 15.2 kDa. The apparent molecular mass of the protein is approximately 35-44 kDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Stability & Storage:

Samples are stable for twelve months from date of receipt at -20°C to -80°C.

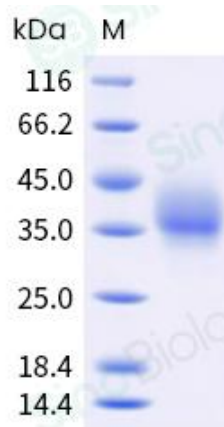
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

CD47 contains 1 Ig-like V-type (immunoglobulin-like) domain and is a receptor for the C-terminal cell binding domain of thrombospondin. It may play a role in membrane transport and signal transduction. CD47 is also a membrane protein, which is involved in the increase in intracellular calcium concentration that occurs upon cell adhesion to extracellular matrix. It is very broadly distributed on normal adult tissues, as well as ovarian tumors, being especially abundant in some epithelia and the brain. CD47 may play a role in membrane transport and/or integrin dependent signal transduction. It may prevent premature elimination of red blood cells. It also may be involved in membrane permeability changes induced following virus infection. By acting as an adhesion receptor for THBS1 on platelets, CD47 plays a role in both cell adhesion and in the modulation of integrins. It also plays an important role in memory formation and synaptic plasticity in the hippocampus.

References

1. Brown EJ, *et al.* (2001) Integrin-associated protein (CD47) and its ligands. *Trends Cell Biol.* 11(3): 130-5. 2. Oldenborg PA. (2004) Role of CD47 in erythroid cells and in autoimmunity. *Leuk Lymphoma.* 45(7): 1319-27. 3. Kaczorowski DJ, *et al.* (2007) Targeting CD47: NO limit on therapeutic potential. *Circ Res.* 100(5): 602-3.