

# Rat CD47 Protein (His Tag)

Catalog Number: 80305-R08H



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

CD47

### Protein Construction:

A DNA sequence encoding the rat CD47 (P97829-1) (Met1-Lys140) was expressed, fused with a polyhistidine tag at the C-terminus.

**Source:** Rat

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** > 90 % as determined by SDS-PAGE

### Bio Activity:

Measured by its binding ability in a functional ELISA. Immobilized Rat CD47-His at 10 µg/ml (100 µl/well) can bind mouse SIRPA-Fc (Cat:50956-M02H). The EC<sub>50</sub> of mouse SIRPA-Fc (Cat:50956-M02H) is 0.6-1.4 µg/ml.

### Endotoxin:

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

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Gln 19

### Molecular Mass:

The recombinant rat CD47 comprises 133 amino acids and predicts a molecular mass of 15.2 kDa. The apparent molecular mass of the recombinant protein is approximately 27-35 kDa in SDS-PAGE under reducing conditions due to glycosylation.

### Formulation:

Lyophilized from sterile PBS, pH 7.4

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

### Storage:

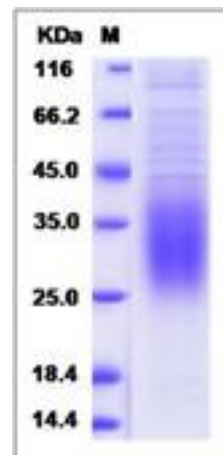
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

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. Oldenburg 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.

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