

CD47 Protein, Human, Recombinant (aa 19-139, His)

General Information

Synonyms:	OA3;CD47 molecule;MER6;IAP
Protein Construction:	Gln19-Pro139
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q08722-1
Molecular Weight:	14.5 kDa (predicted); 40-55 kDa (reducing conditions)

QC Testing

Biological Activity:	Immobilized Human CD47, His Tag at 2 µg/ml (100 µl/well) on the plate. Dose response curve for Human SIRP alpha, hFc Tag with the EC50 of 82.1 ng/ml determined by ELISA (QC Test). Human CD47, His Tag captured on CM5 Chip via Anti-His Antibody can bind Human SIRP alpha, hFc Tag with an affinity constant of 18.9 nM as determined in SPR assay (Biacore T200).
Purity:	≥ 95 % as determined by SDS-PAGE. ≥ 90 % as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from 0.22µm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.

Preparation and Storage

Reconstitution:	Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 µg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.
Stability & Storage:	It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots. <small>Actual storage temperature shall be subject to the COA.</small>
Shipping:	In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

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. Cancer Immunotherapy Co-inhibitory Immune Checkpoint Targets Immune Checkpoint Immune Checkpoint Detection: Antibodies Immune Checkpoint Detection: ELISA Antibodies Immune Checkpoint Detection: WB Antibodies Immune Checkpoint Targets Immunotherapy Targeted Therapy

Reference

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

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