

CD47 Protein, Rat, Recombinant (hFc)

General Information

Synonyms: CD47 molecule

Protein Construction: Gln19-Lys140

Species: Rat

Expression Host: HEK293 Cells

Accession: P97829-1

Molecular Weight: 40.40 kDa (predicted); 50-70 kDa (reducing conditions)

QC Testing

Biological Activity: Immobilized Mouse SIRP alpha, His Tag at 5 µg/ml (100 µl/well) on the plate. Dose response curve for Rat CD47, hFc Tag with the EC50 of 47.6 ng/ml determined by ELISA (QC Test).

Purity: > 95% as determined by Bis-Tris PAGE;
> 95% as determined by HPLC

Endotoxin: < 1.0 EU/µg of the protein as determined by the LAL method.

Formulation: Lyophilized from 0.22 µm 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.

Shipping:

In general, Lyophilized powders are shipping with blue ice.

Protein Background

CD47 (Cluster of Differentiation 47) also known as integrin associated protein (IAP) is a transmembrane protein that in humans is encoded by the CD47 gene. CD47 belongs to the immunoglobulin superfamily and partners with membrane integrins and also binds the ligands thrombospondin-1 (TSP-1) and signal-regulatory protein alpha (SIRP α). CD-47 acts as a don't eat me signal to macrophages of the immune system which has made it a potential therapeutic target in some cancers.

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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