

Active Recombinant Human CD47 protein, Fc/Avi-tagged,

Cat. No. CD47-051H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human CD47(Gln19-Pro139) protein, fused to Fc/Avi tag at the C-terminus, was expressed in CHO cells .
Species	Human
Source	CHO
ProteinLength	Gln19-Pro139
Description	<p>CD47, also known as Integrin-Associated Protein (IAP) and OA3, is a 40-60 kDa variably glycosylated atypical member of the immunoglobulin superfamily (1, 2). Human CD47 is an integral membrane protein that consists of a 123 amino acid (aa) extracellular domain (ECD) with a single Ig-like domain, five membrane-spanning regions with short intervening loops, and a 34 aa C-terminal cytoplasmic tail (3). Alternate splicing of human CD47 generates additional isoforms with deletions in the cytoplasmic tail (3). Within the N-terminal ECD, human CD47 shares 63% aa sequence identity with mouse and rat CD47. A portion of the N-terminal ECD can be shed from smooth muscle cells by MMP-2-mediated proteolysis (4). The ubiquitously expressed CD47 binds to SIRP family members on macrophages, neutrophils, and T cells (5, 6). These interactions prevent macrophage-mediated clearance of healthy CD47-expressing cells and promote immune cell transmigration across the vascular endothelium (5-8). The CD47-SIRP alpha interaction is species specific, and this lack of cross-species interaction has been implicated in xenotransplantation rejection (16). CD47 associates in cis with Fas</p>

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on T cells and enhances Fas-mediated apoptosis; its ligation promotes T cell energy and dampens Th1 immune responses (9-11). CD47 also associates in cis with Integrins alpha 4 beta 1, alpha V beta 3, alpha 2b beta 3, and alpha 2 beta 1 which can positively or negatively modulate Integrin-mediated function (2, 12). In the vasculature, CD47 binding by Thrombospondin-1 inhibits the angiogenic and vasorelaxant effects of nitric oxide (2, 13, 14). On dendritic cells and myeloma cells, CD47 ligation by TSP-1 induces giant cell formation and osteoclast differentiation (15).

Predicted N Terminal No results obtained: Gln19 predicted

Form Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.

Bio-activity Measured by its binding ability in a functional ELISA. When Recombinant Human SIRPA Fc Chimera is immobilized at 0.1 µg/mL (100 µL/well), the concentration of Recombinant Human CD47 Fc Chimera Avi-tag that produces 50% of the optimal binding response is 6-48 ng/mL.

Molecular Mass 60-70 kDa, under reducing conditions

Endotoxin <0.10 EU per 1 µg of the protein by the LAL method.

Purity >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

Applications Bioactivity

Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 3 months, -20 to -70 °C under sterile conditions after

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reconstitution.

Reconstitution Reconstitute at 100 µg/mL in PBS.

GENE INFORMATION

Gene Name [CD47 CD47 molecule \[Homo sapiens \]](#)

Official Symbol [CD47](#)

Synonyms

CD47; CD47 molecule; CD47 antigen (Rh related antigen, integrin associated signal transducer) , MER6; leukocyte surface antigen CD47; antigen identified by monoclonal 1D8; antigenic surface determinant protein OA3; CD47 glycoprotein; IAP; integrin associated protein; OA3; Rh related antigen; Rh-related antigen; integrin-associated protein; integrin-associated signal transducer; CD47 antigen (Rh-related antigen, integrin-associated signal transducer); MER6;

Gene ID [961](#)

mRNA Refseq [NM_001777](#)

Protein Refseq [NP_001768](#)

MIM [601028](#)

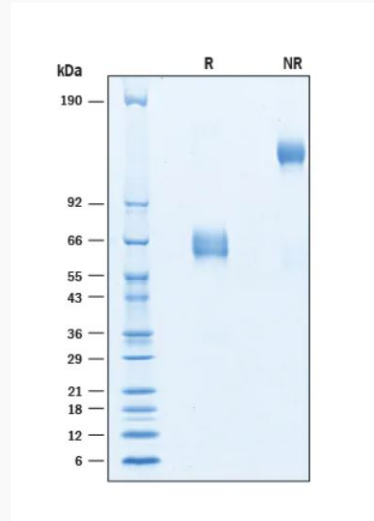
UniProt ID [Q08722](#)

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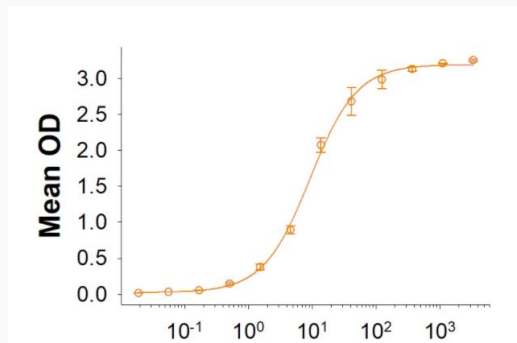
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SDS-PAGE



2 μ g/lane Protein was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie[®] Blue staining.

Binding Activity



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