

# CD47

Catalog # PVGS1540

## Product Information

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<b>Primary Accession Species</b>	<a href="#">Q08722</a> Human
<b>Sequence</b>	Gln19-Pro139
<b>Purity</b>	> 97% as analyzed by SDS-PAGE
<b>Endotoxin Level Biological Activity</b>	Immobilized SIRPa-His, Human (Cat. No.: Z03421) at 2.0 µg/ml (100 µl/well), can bind CD47, hFc, Human (Cat. No.: Z03418).
<b>Expression System</b>	HEK 293
<b>Formulation Reconstitution</b>	Lyophilized from a 0.2 µm filtered solution in PBS. It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH <sub>2</sub> O or PBS up to 100 µg/ml.
<b>Storage &amp; Stability</b>	Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

## Additional Information

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<b>Gene ID</b>	961
<b>Other Names</b>	Leukocyte surface antigen CD47, Antigenic surface determinant protein OA3, Integrin-associated protein, IAP, Protein MER6, CD47, CD47, MER6
<b>Target Background</b>	Leukocyte surface antigen CD47 is also known as Antigenic surface determinant protein OA3, Integrin-associated protein (IAP) and Protein MER6. CD47 contains 1 Ig-like V-type (immunoglobulin-like) domain. CD47 is a 40-60 kDa variably glycosylated atypical member of the immunoglobulin superfamily and 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. CD47 has a role in both cell adhesion by acting as an adhesion receptor for THBS1 on platelets, and in the modulation of integrins and plays an important role in memory formation and synaptic plasticity in the hippocampus by similarity. CD47 is the receptor for SIRPA, binding to which prevents maturation of immature dendritic cells and inhibits cytokine production by mature dendritic cells. CD47 Interaction with SIRPG

mediates cell-cell adhesion, enhances superantigen-dependent T-cell-mediated proliferation and costimulates T-cell activation.

## Protein Information

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<b>Name</b>	CD47
<b>Synonyms</b>	MER6
<b>Function</b>	<p>Adhesive protein that mediates cell-to-cell interactions (PubMed: <a href="#">11509594</a>, PubMed:<a href="#">15383453</a>). Acts as a receptor for thrombospondin THBS1 and as modulator of integrin signaling through the activation of heterotrimeric G proteins (PubMed:<a href="#">19004835</a>, PubMed:<a href="#">7691831</a>, PubMed:<a href="#">8550562</a>). Involved in signal transduction, cardiovascular homeostasis, inflammation, apoptosis, angiogenesis, cellular self-renewal, and immunoregulation (PubMed:<a href="#">11509594</a>, PubMed:<a href="#">15383453</a>, PubMed:<a href="#">19004835</a>, PubMed:<a href="#">27742621</a>, PubMed:<a href="#">32679764</a>, PubMed:<a href="#">7691831</a>, PubMed:<a href="#">8550562</a>). Plays a role in modulating pulmonary endothelin EDN1 signaling (PubMed:<a href="#">27742621</a>). Modulates nitrous oxide (NO) signaling, in response to THBS1, hence playing a role as a pressor agent, supporting blood pressure (By similarity). Plays an important role in memory formation and synaptic plasticity in the hippocampus (By similarity). Receptor for SIRPA, binding to which prevents maturation of immature dendritic cells and inhibits cytokine production by mature dendritic cells (PubMed:<a href="#">11509594</a>). Interaction with SIRPG mediates cell-cell adhesion, enhances superantigen-dependent T-cell-mediated proliferation and costimulates T-cell activation (PubMed:<a href="#">15383453</a>). Positively modulates FAS-dependent apoptosis in T-cells, perhaps by enhancing FAS clustering (By similarity). Plays a role in suppressing angiogenesis and may be involved in metabolic dysregulation during normal aging (PubMed:<a href="#">32679764</a>). In response to THBS1, negatively modulates wound healing (By similarity). Inhibits stem cell self-renewal, in response to THBS1, probably by regulation of the stem cell transcription factors POU5F1/OCT4, SOX2, MYC/c-Myc and KLF4 (By similarity). May play a role in membrane transport and/or integrin dependent signal transduction (PubMed:<a href="#">7691831</a>). May prevent premature elimination of red blood cells (By similarity).</p>
<b>Cellular Location</b>	Cell membrane; Multi-pass membrane protein
<b>Tissue Location</b>	Very broadly distributed on normal adult tissues, as well as ovarian tumors, being especially abundant in some epithelia and the brain. Macrophages (PubMed:39121194)

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