

## CD47 Protein, Mouse (140a.a, HEK293, His)

<b>Cat. No.:</b>	HY-P70820
<b>Synonyms:</b>	Leukocyte Surface Antigen CD47; Antigenic Surface Determinant Protein OA3; Integrin-Associated Protein; IAP; Protein MER6; CD47; MER6
<b>Species:</b>	Mouse
<b>Source:</b>	HEK293
<b>Accession:</b>	Q61735-2 (Q19-P158)
<b>Gene ID:</b>	16423
<b>Molecular Weight:</b>	30-60 kDa

### PROPERTIES

<b>AA Sequence</b>	<p>           Q L L F S N V N S I    E F T S C N E T V V    I P C I V R N V E A    Q S T E E M F V K W            K L N K S Y I F I Y    D G N K N S T T T D    Q N F T S A K I S V    S D L I N G I A S L            K M D K R D A M V G    N Y T C E V T E L S    R E G K T V I E L K    N R T A F N T D Q G            S A C S Y E E E K G    G C K L V S W F S P         </p>
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
<b>Storage &amp; Stability</b>	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	<p>CD47 Protein, an adhesive protein, orchestrates cell-to-cell interactions and acts as a receptor for thrombospondin THBS1, concurrently modulating integrin signaling through the activation of heterotrimeric G proteins. This multifaceted protein is intricately involved in signal transduction, cardiovascular homeostasis, inflammation, apoptosis, angiogenesis, cellular self-renewal, and immunoregulation. CD47 plays a pivotal role in modulating pulmonary endothelin EDN1 signaling and acts as a pressor agent supporting blood pressure in response to THBS1-induced nitrous oxide (NO) signaling. Additionally, it contributes significantly to memory formation and synaptic plasticity in the hippocampus. As a receptor for SIRPA, CD47 prevents the maturation of immature dendritic cells, inhibits cytokine production by mature dendritic cells, and mediates cell-cell adhesion through interaction with SIRPG. Furthermore, it positively modulates FAS-dependent apoptosis in T-cells</p>
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and suppresses angiogenesis, potentially influencing metabolic dysregulation during normal aging. CD47's role in wound healing modulation, inhibition of stem cell self-renewal, potential involvement in membrane transport, integrin-dependent signal transduction, and prevention of premature elimination of red blood cells underscores its diverse impact on cellular processes. Existing as a monomer, CD47 interacts with THBS1, SIRPA, FAS/CD95, SIRPG, UBQLN1, UBQLN2, and possibly fibrinogen, emphasizing its intricate involvement in a wide array of cellular pathways.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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