

CD47 Protein, Rat (HEK293, Fc)

Cat. No.:	HY-P75402
Synonyms:	Leukocyte Surface Antigen CD47; IAP; CD47; MER6
Species:	Rat
Source:	HEK293
Accession:	P97829 (Q19-K140)
Gene ID:	29364
Molecular Weight:	50-70 kDa

PROPERTIES

AA Sequence	<p> Q L L L S K V K S V E F T S C N D T V V I P C K V L N V E A Q S T D E M F V K W K L N K S Y I F I Y D G N K N S T T R E Q N F T S A K I S V S D L L K G I A S L T M D T H E A V V G N Y T C E V T E L S R E G K T V I E L K N R P V S W F S T N E K </p>
Biological Activity	<p>1. Immobilized Mouse SIRP alpha, His Tag at 2 µg/mL (100 µl/well) on the plate. Dose response curve for Rat CD47, hFc Tag with the EC₅₀ of 88.7 ng/mL determined by ELISA.</p> <p>2. Measured by its binding ability in a functional ELISA. Immobilized Rat CD47 at 10 µg/mL (100 µL/well) can bind Biotinylated Mouse SIRP alpha. The ED₅₀ for this effect is 0.387 µg/mL.</p>
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4 or 20 mM PB, 150 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	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.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	The CD47 protein is an adhesive protein that facilitates cell-to-cell interactions. It acts as a receptor for thrombospondin THBS1 and modulates integrin signaling through the activation of heterotrimeric G proteins. CD47 is involved in various biological processes, including signal transduction, cardiovascular homeostasis, inflammation, apoptosis, angiogenesis,
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cellular self-renewal, and immunoregulation. It also plays a role in modulating pulmonary endothelin EDN1 signaling and nitrous oxide (NO) signaling, contributing to blood pressure regulation. Additionally, CD47 is important for memory formation and synaptic plasticity in the hippocampus. It serves as a receptor for SIRPA, preventing maturation of immature dendritic cells and inhibiting cytokine production by mature dendritic cells. Interaction with SIRPG enhances cell-cell adhesion, T-cell proliferation, and T-cell activation. CD47 positively modulates FAS-dependent apoptosis in T-cells and suppresses angiogenesis. It may also be involved in metabolic dysregulation during normal aging and regulate wound healing and stem cell self-renewal. CD47 may play a role in membrane transport, integrin-dependent signal transduction, and prevention of premature elimination of red blood cells. It interacts with THBS1, SIRPA, FAS/CD95, SIRPG, UBQLN1, UBQLN2, and fibrinogen.

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

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