

CD47 Protein, Human (HEK293)

Cat. No.:	HY-P72917
Synonyms:	Leukocyte Surface Antigen CD47; IAP; CD47; MER6
Species:	Human
Source:	HEK293
Accession:	Q08722-1/NP_942088.1 (Q19-P139)
Gene ID:	961
Molecular Weight:	35-48 kDa

PROPERTIES

AA Sequence	<p>M W P L V A A L L L G S A C C G S A Q L L F N K T K S V E F T F C N D T V V I P</p> <p>C F V T N M E A Q N T T E V Y V K W K F K G R D I Y T F D G A L N K S T V P T D</p> <p>F S S A K I E V S Q L L K G D A S L K M D K S D A V S H T G N Y T C E V T E L T</p> <p>R E G E T I I E L K Y R V V S W F S P</p>
Biological Activity	Immobilized Human CD47, No Tag at 5 µg/mL (100 µl/well) on the plate. Dose response curve for Human SIRP alpha, hFc Tag with the EC ₅₀ of ≤1.83 µg/mL determined by ELISA.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
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.
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	<p>CD47, an adhesive protein, facilitates cell-to-cell interactions and serves as a receptor for thrombospondin THBS1, modulating integrin signaling through the activation of heterotrimeric G proteins. Involved in diverse cellular processes, CD47 contributes to signal transduction, cardiovascular homeostasis, inflammation, apoptosis, angiogenesis, cellular self-renewal, and immunoregulation. Notably, it plays a role in modulating pulmonary endothelin EDN1 signaling and functions as a pressor agent in the regulation of blood pressure in response to THBS1. CD47 is crucial for memory formation and</p>
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synaptic plasticity in the hippocampus, acting as a receptor for SIRPA and SIRPG, which impacts dendritic cell maturation, cytokine production, cell-cell adhesion, and T-cell activation. Furthermore, CD47 positively modulates FAS-dependent apoptosis in T-cells and suppresses angiogenesis, contributing to metabolic dysregulation during aging. In response to THBS1, CD47 negatively modulates wound healing, inhibits stem cell self-renewal, and may play a role in membrane transport and/or integrin-dependent signal transduction. As a monomer, CD47 interacts with THBS1, SIRPA, FAS/CD95, SIRPG, UBQLN1, UBQLN2, and potentially fibrinogen, highlighting its intricate involvement in cellular and molecular pathways.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA