CD47 Protein, Human (Biotinylated, HEK293, His-Avi)

Cat. No.:	HY-P78095
Synonyms:	CD47 glycoprotein; CD47 molecule; CD47; IAP; OA3; MER6
Species:	Human
Source:	HEK293
Accession:	Q08722 (Q19-P139)
Gene ID:	961
Molecular Weight:	45-55 kDa

PROPERTIES

AA Sequence	Q L L F N K T K S V E F T F C N D T V V I 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 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 R E G E T I I E L K Y R V V S W F S P
Biological Activity	Immobilized Human SIRP alpha, hFc Tag at 1 μg/ml (100 μl/Well) on the plate. Dose response curve for Biotinylated Human CD47, His Tag with the EC_{50} of 0.48-0.83 μg/ml determined by ELISA.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4. Normally 8% trehalose is added as protectant before lyophilization.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
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	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

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.

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