CD47 Protein, Mouse (HEK293, His)

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

PROPERTIES

AA Sequence	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
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
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. 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	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

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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