CD47 Protein, Mouse (Q61735-1, HEK293, His)

Cat. No.:	HY-P72918
Synonyms:	Leukocyte Surface Antigen CD47; IAP; CD47; MER6
Species:	Mouse
Source:	HEK293
Accession:	Q61735-1 (Q19-K140)
Gene ID:	16423
Molecular Weight:	34-44 kDa

PROPERTIES

AA Sequence	MWPLAAALLL GSCCCGSAQL LFSNVNSIEF TSCNETVVIP CIVRNVEAQS TEEMFVKWKL NKSYIFIYDG NKNSTTTDQN FTSAKISVSD LINGIASLKM DKRDAMVGNY TCEVTELSRE GKTVIELKNR TVSWFSPNEK
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized CD47 Protein, Mouse (HEK293, His) at 10μg/mL (100μL/well) can bind mouse SIRPA-Fc and the EC_{50} is 0.07-0.3 μg/mL.
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.
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 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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