

CD47 Protein, Mouse (HEK293, Tag Free)

Cat. No.:	HY-P74289A
Synonyms:	Leukocyte Surface Antigen CD47; IAP; CD47; MER6
Species:	Mouse
Source:	HEK293
Accession:	ADQ12919.1 (Q19-K140)
Gene ID:	16423
Molecular Weight:	Approximately 27-34 kDa

PROPERTIES

AA Sequence	<p> 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 V S W F S P N E K </p>
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized Mouse CD47 at 10 µg/mL (100 µL/well) can bind Biotinylated Mouse SIRP alpha. The ED ₅₀ for this effect is 1.14 µg/mL, corresponding to a specific activity is 877.2 Unit/mg.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 µm filtered solution of 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	<p>CD47, also known as integrin-associated protein (IAP), is a transmembrane protein encoded by the CD47 gene. CD47 belongs to the immunoglobulin superfamily and binds to membrane integrins and ligands platelet reactive protein-1 (TSP-1) and signal regulatory protein α (SIRPα). CD47 is involved in a variety of biological processes, including signal transduction, cardiovascular homeostasis, inflammation, apoptosis, angiogenesis, cell self-renewal, and immune regulation. In addition, CD47 is also important in memory formation and synaptic plasticity in the hippocampus. As a receptor for SIRPA, it prevents</p>
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immature dendritic cells from maturing and inhibits the production of cytokines by mature dendritic cells. Interaction with SIRPG enhances cell-cell adhesion, T-cell proliferation, and T-cell activation. CD47 positively regulates FAS-dependent T cell apoptosis and inhibits angiogenesis. It may also be involved in metabolic dysregulation during normal aging, regulating wound healing and stem cell self-renewal. CD47 may play a role in cell membrane transport, integrin-dependent signal transduction, and prevention of premature clearance of red blood cells. It interacts with THBS1, SIRPA, FAS/CD95, SIRPG, UBQLN1, UBQLN2, and fibrinogen. Activation of the CD47 receptor induces the proliferation of human astrocytoma cells through an AKT-dependent pathway. CD47 is a potential therapeutic target for some cancers and is also used to treat pulmonary fibrosis^{[1][2][3]}.

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

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