

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

Cat. No.:	HY-P78561
Synonyms:	CD47; MER6; IAP; OA3
Species:	Human
Source:	HEK293
Accession:	Q08722-3 (Q19-P139)
Gene ID:	961
Molecular Weight:	60-66 kDa

PROPERTIES

Biological Activity	Immobilized Human SIRP alpha at 2 µg/mL (100 µL/well) can bind Biotinylated Human CD47 mFc-Avi with a linear range of 6-8 ng/mL.
Appearance	Lyophilized powder
Formulation	Lyophilized a 0.22 µm filtered solution of PBS, 6% Trehalose, 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.
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.

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

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