

CD44 Protein, Human (242a.a, HEK293, His)

Cat. No.:	HY-P700967
Synonyms:	CD44; CDw44; Epican; ECMR-III; LHR; MDU2; MDU3; MIC4; PGP-I; CSPG8; HCELL; HUTCH-I; IN; MC56
Species:	Human
Source:	HEK293
Accession:	P16070-1 (Q21-P220 & Q386-A427)
Gene ID:	960
Molecular Weight:	45-68 kDa

PROPERTIES

Biological Activity	Immobilized Human CD44, His Tag at 0.5 µg/mL (100 µl/well) on the plate. Dose response curve for Anti-CD44 Antibody, hFc Tag with the EC ₅₀ of ≤12 ng/mL determined by ELISA.
Appearance	Lyophilized powder
Formulation	Lyophilized from 0.22 µm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.
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

CD44, a cell-surface receptor, plays a pivotal role in cell-cell interactions, adhesion, and migration, enabling cells to sense and respond to alterations in the tissue microenvironment. Its involvement extends to diverse cellular functions, including the activation, recirculation, and homing of T-lymphocytes, hematopoiesis, inflammation, and response to bacterial infection. CD44 engages various extracellular matrix components, such as hyaluronan/HA, collagen, growth factors, cytokines, or proteases through its ectodomain, serving as a platform for signal transduction. This involves the assembly of protein complexes via its cytoplasmic domain, containing receptor kinases and membrane proteases. Effectors like PKN2, RAC1, RHOA, Rho-kinases, and phospholipase C coordinate signaling pathways with CD44, leading to calcium mobilization and actin-mediated cytoskeleton reorganization, crucial for cell migration and adhesion. CD44 interacts with a spectrum of molecules, including PKN2, TIAM1, TIAM2, hyaluronan, collagen, laminin, fibronectin, UNC119, PDPN, RDX, EZR, MSN, EGFR, and CD74, forming a complex network essential for its diverse cellular functions.

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

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