

## CD44 Protein, Human (HEK293, His)

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| <b>Cat. No.:</b>         | HY-P70507  |
| <b>Synonyms:</b>         | CD44 Antigen; CDw44; Epican; Extracellular Matrix Receptor III; ECMR-III; GP90 Lymphocyte Homing/Adhesion Receptor; HUTCH-I; Heparan Sulfate Proteoglycan; Hermes Antigen; Hyaluronate Receptor; Phagocytic Glycoprotein 1; PGP-1; Phagocytic Glycoprotein I; PGP-I; CD44; LHR |
| <b>Species:</b>          | Human  |
| <b>Source:</b>           | HEK293   |
| <b>Accession:</b>        | P16070 (Q21-P220)  |
| <b>Gene ID:</b>          | 960  |
| <b>Molecular Weight:</b> | 38-50 kDa  |

### PROPERTIES

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| <b>AA Sequence</b>             | <p>           Q I D L N I T C R F    A G V F H V E K N G    R Y S I S R T E A A    D L C K A F N S T L<br/>           P T M A Q M E K A L    S I G F E T C R Y G    F I E G H V V I P R    I H P N S I C A A N<br/>           N T G V Y I L T S N    T S Q Y D T Y C F N    A S A P P E E D C T    S V T D L P N A F D<br/>           G P I T I T I V N R    D G T R Y V Q K G E    Y R T N P E D I Y P    S N P T D D D V S S<br/>           G S S S E R S S T S    G G Y I F Y T F S T    V H P I P D E D S P    W I T D S T D R I P         </p> |
| <b>Biological Activity</b>     | Measured in a cell proliferation assay using A549 cells. The ED <sub>50</sub> this effect is 1.543 ng/ml, corresponding to a specific activity is 6.481×10 <sup>5</sup> units/mg.   |
| <b>Appearance</b>              | Lyophilized powder.   |
| <b>Formulation</b>             | Lyophilized from a 0.2 μm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.4.   |
| <b>Endotoxin Level</b>         | <1 EU/μg, determined by LAL method.   |
| <b>Reconstitution</b>          | It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).   |
| <b>Storage &amp; Stability</b> | 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.  |
| <b>Shipping</b>                | Room temperature in continental US; may vary elsewhere.   |

### DESCRIPTION

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| <b>Background</b> | 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 |
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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.

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

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