

## CD4 Protein, Human (365a.a, HEK293, His)

Cat. No.:	HY-P70537
Synonyms:	T-cell surface glycoprotein CD4; T-cell surface antigen T4/Leu-3; sCD4
Species:	Human
Source:	HEK293
Accession:	P01730 (K26-W390)
Gene ID:	920
Molecular Weight:	49-58 kDa

### PROPERTIES

AA Sequence	<pre> K K V V L G K K G D   T V E L T C T A S Q   K K S I Q F H W K N   S N Q I K I L G N Q G S F L T K G P S K   L N D R A D S R R S   L W D Q G N F P L I   I K N L K I E D S D T Y I C E V E D Q K   E E V Q L L V F G L   T A N S D T H L L Q   G Q S L T L T L E S P P G S S P S V Q C   R S P R G K N I Q G   G K T L S V S Q L E   L Q D S G T W T C T V L Q N Q K K V E F   K I D I V V L A F Q   K A S S I V Y K K E   G E Q V E F S F P L A F T V E K L T G S   G E L W W Q A E R A   S S S K S W I T F D   L K N K E V S V K R V T Q D P K L Q M G   K K L P L H L T L P   Q A L P Q Y A G S G   N L T L A L E A K T G K L H Q E V N L V   V M R A T Q L Q K N   L T C E V W G P T S   P K L M L S L K L E N K E A K V S K R E   K A V W V L N P E A   G M W Q C L L S D S   G Q V L L E S N I K V L P T W           </pre>
Biological Activity	Measured by the ability of the immobilized protein to support the adhesion of Hela human cervical epithelial carcinoma cells. The ED <sub>50</sub> this effect is 1.335-1.418 µg/mL, corresponding to a specific activity is 705.22-749.06 units/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4 or 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 <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).
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

The CD4 protein, an integral membrane glycoprotein, assumes a crucial role in immune responses, undertaking diverse functions against both external and internal challenges. In T-cells, its primary function is as a coreceptor for the MHC class II molecule:peptide complex, where class II peptides originate from extracellular proteins, while class I peptides are derived from cytosolic proteins. CD4 interacts concurrently with the T-cell receptor (TCR) and the MHC class II presented by antigen-presenting cells (APCs), leading to the recruitment of the Src kinase LCK to the vicinity of the TCR-CD3 complex. Subsequently, LCK initiates various intracellular signaling pathways by phosphorylating diverse substrates, ultimately resulting in lymphokine production, enhanced motility, adhesion, and the activation of T-helper cells. In other cell types such as macrophages or NK cells, CD4 contributes to differentiation/activation, cytokine expression, and cell migration through a TCR/LCK-independent pathway. Additionally, it plays a pivotal role in the development of T-helper cells in the thymus and triggers the differentiation of monocytes into functional mature macrophages. Notably, CD4 acts as the primary receptor for human immunodeficiency virus-1 (HIV-1), with its down-regulation facilitated by HIV-1 Vpu, and it also serves as a receptor for Human Herpes virus 7/HHV-7.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA