**Product** Data Sheet

**Proteins** 





## CD8 alpha Protein, Mouse (169a.a, HEK293, His)

Cat. No.: HY-P78264

Synonyms: CD8a; Lyt-2; CD8; Leu2; MAL; p32; CD8a molecule; OKT8 T-cell antigen

Species: HEK293 Source:

Accession: P01731 (K28-Y196)

Gene ID: 12525 **Molecular Weight:** 32-42 kDa

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Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4. Normally 5% trehalose is added as protectant before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 $\mu g/mL$ in ddH <sub>2</sub> 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

The CD8A, an integral membrane glycoprotein, plays a critical role in the immune response, fulfilling multiple functions in responses against both external and internal threats. In T-cells, it primarily functions as a coreceptor for the MHC class I molecule:peptide complex, interacting simultaneously with the T-cell receptor (TCR) and the MHC class I proteins presented by antigen-presenting cells (APCs). This interaction leads to the recruitment of the Src kinase LCK to the vicinity of the TCR-CD3 complex. LCK, in turn, initiates diverse intracellular signaling pathways, phosphorylating various substrates and ultimately promoting lymphokine production, motility, adhesion, and activation of cytotoxic T-lymphocytes (CTLs). This mechanism enables CTLs to recognize and eliminate infected cells and tumor cells. In NK-cells, the presence of CD8A homodimers at the cell surface provides a survival mechanism allowing the conjugation and lysis of multiple target cells. CD8A homodimer molecules also contribute to the survival and differentiation of activated lymphocytes into memory CD8 T-cells. The CD8A forms disulfide-linked complexes at the cell surface and also homodimers in various cell types, including NK-cells and peripheral blood T-lymphocytes. It interacts with the MHC class I HLA-A/B2M dimer and with LCK in a zincdependent manner.

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 $\label{lem:caution:Product} \textbf{Caution: Product has not been fully validated for medical applications. For research use only.}$ 

Tel: 609-228-6898 Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

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

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