# CD8 alpha Protein, Cynomolgus (HEK293, Fc)

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| **Cat. No.:** | HY-P75381 |
| **Synonyms:** | T-cell surface glycoprotein CD8 alpha chain; CD8a; CD8A; MAL |
| **Species:** | Cynomolgus |
| **Source:** | HEK293 |
| **Accession:** | XP_005575419 (M42-D223) |
| **Gene ID:** | 102124337 |
| **Molecular Weight:** | Approximately 44.4 kDa |

## PROPERTIES

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| **Appearance** | Lyophilized powder. |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. |
| **Endotoxin Level** | <1 EU/μg, determined by LAL method. |
| **Reconsititution** | It is not recommended to reconstitute to a concentration less than 100 μg/mL in $ddH_2O$. |
| **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

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| **Background** | The CD8 alpha protein, an integral membrane glycoprotein, plays a pivotal role in the immune response, serving multiple functions in responses against both external and internal threats. In T-cells, it functions primarily 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 facilitates the recruitment of the Src kinase LCK to the vicinity of the TCR-CD3 complex. LCK, in turn, initiates various intracellular signaling pathways by phosphorylating diverse substrates, ultimately leading to lymphokine production, motility, adhesion, and the 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. CD8 alpha forms disulfide-linked heterodimers with CD8B at the cell surface and also homodimers in various cell types, including NK-cells and peripheral blood T-lymphocytes. Additionally, it interacts with the MHC class I HLA-A/B2M dimer and associates with LCK in a zinc-dependent manner. |

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

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