CD8 alpha Protein, Ferret (HEK293, His)

Cat. No.:	HY-P75380
Synonyms:	T-cell surface glycoprotein CD8 alpha chain; CD8a; CD8A; MAL
Species:	Others
Source:	HEK293
Accession:	ABS50091 (G23-E186)
Gene ID:	101685563
Molecular Weight:	25-29 kDa

PROPERTIES

AA Sequence	G P S Q F R L S P A K V V G Q L G E K V E L Q C E V L L P S A A P G C S W L L Q K N E P A A R P V F L M Y L S Q T R T K L A D G L D S E Q I S G K K I R D T L Y S L T L R R F R K E D E G Y Y F C S V L S N S V L Y F S S F V P V F L P V K P T P T P A P R L P T R A P T N T S Q P V S Q R P G I C R P P A G K P V E K G V L G F A C E
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized Ferret CD8 alpha at 2 μg/mL (100 μL/well) can bind biotinylated human B2M. The ED_{50} for this effect is 0.4437 μg/mL.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
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. 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 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.

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