CD8 alpha Protein, Human (Biotinylated, HEK293, His-Avi)

Cat. No.:	HY-P78897
Synonyms:	CD8A; CD8; Leu2; MAL; p32
Species:	Human
Source:	HEK293
Accession:	P01732 (S22-D182)
Gene ID:	925
Molecular Weight:	30-38 kDa

PROPERTIES

Biological Activity	Immobilized Anti-CD8 Antibody, hFc Tag at 0.5μg/ml (100μl/well) on the plate. Dose response curve for Biotinylated Human CD8 alpha, His Tag with the EC_{50} of 6.0ng/ml determined by ELISA.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4. Normally 8% 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 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

Background	CD8 alpha, an integral membrane glycoprotein, plays a pivotal role in orchestrating immune responses against both external and internal threats. In T-cells, it serves as a coreceptor for MHC class I molecule:peptide complexes, facilitating the recognition of antigens derived from cytosolic proteins. Simultaneously interacting with the T-cell receptor (TCR) and MHC class I proteins on antigen-presenting cells (APCs), CD8 alpha recruits the Src kinase LCK to the TCR-CD3 complex, initiating intracellular signaling pathways that culminate in lymphokine production, cellular motility, adhesion, and activation of cytotoxic T-lymphocytes (CTLs). This mechanism empowers CTLs to identify and eliminate infected or tumor cells. In NK-cells, CD8 alpha homodimers at the cell surface contribute to a survival mechanism, enabling the conjugation and lysis of multiple target cells. Moreover, CD8 alpha homodimers promote the survival and differentiation of activated lymphocytes into memory CD8 T-cells. The protein forms disulfide-linked heterodimers with CD8B on the cell surface and homodimers in various cell types, including NK-cells and peripheral blood T-lymphocytes. Interactions with the MHC class I HLA-A/B2M dimer and LCK, as well as its direct interaction with HLA-G, highlight the intricate network of molecular associations that underlie CD8 alpha's diverse functions in immune regulation.

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

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