Data Sheet (Cat.No.TMPY-02165)

TargetMol

CD8 alpha Protein, Ferret, Recombinant (His)

General Information

Synonyms:	CD8a molecule;CD8 α
Protein Construction:	A DNA sequence encoding the Ferret (Mustela putorius furo) CD8A (ABS50091.1) extracellular domain (Met 1-Glu 186) was expressed, with a C-terminal polyhistidine tag. Predicted N terminal: Gly 23
Species:	Ferret
Expression Host:	HEK293 Cells
Accession:	I6LI23
Molecular Weight:	19.5 kDa (predicted); 28-33 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	1. Measured by its ability to bind biotinylated recombinant human B2M in a functional ELISA. 2. Measured by its ability to bind biotinylated recombinant human FCGRT+B2M in a functional ELISA. 3. Measured by its ability to bind biotinylated recombinant human LCK in a functional ELISA.
Purity:	> 92 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

T-cell surface glycoprotein CD8 alpha chain, also known as CD8a, is a single-pass type I membrane protein. The CD8 glycoprotein is expressed by thymocytes, mature T cells and natural killer (NK) cells and has been implicated

in the recognition of monomorphic determinants on major histocompatibility complex (MHC) Class I antigens, and in signal transduction during the course of T-cell activation. Both human and rodent CD8 antigens are comprised of two distinct polypeptide chains, alpha and beta. The Ig domains of CD8 alpha are involved in controlling the ability of CD8 to be expressed. Mutation of B- and F-strand cysteine residues in CD8 alpha reduced the ability of the protein to fold properly and, therefore, to be expressed. Defects in CD8A are a cause of familial CD8 deficiency. Familial CD8 deficiency is a novel autosomal recessive immunologic defect characterized by absence of CD8+ cells, leading to recurrent bacterial infections.

Reference

Devine, L. et al., 2000, J Immunol. 164 (2): 833-8.
Arcaro, A. et al., 2000, J Immunol. 165 (4): 2068-76.
Saha, K. et al., 2001, Nat Med. 7 (1): 65-72.
Romero, P. et al., 2005, Eur J Immunol. 35 (11): 3092-4.