Data Sheet (Cat.No.TMPY-06933)

TargetMol

CD8 alpha Protein, Human, Recombinant (His & Avi), Biotinylated

General Information

Synonyms:	p32 186910;MAL;CD8;Leu2;CD8 alpha;CD8a molecule;p32;CD8 α;Leu-2
Protein Construction:	Ser22-Asp182
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P01732-1
Molecular Weight:	20.5 kDa (predicted); 30-38 kDa (reducing conditions)

QC Testing

Biological Activity:	Immobilized Biotinylated Human CD8 alpha, His Tag at 0.5 μg/ml (100 μl/well) on the streptavidin precoated plate (5 μg/ml). Dose response curve for Anti-CD8 Antibody, hFc Tag with the EC50 of 4.6ng/ml determined by ELISA (QC Test).
Purity:	> 95% as determined by Bis-Tris PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from 0.22μm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

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

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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.