

## CD3 epsilon/CD3e Protein, Human, Recombinant (hFc & Avi), Biotinylated

### General Information

Synonyms:	T-Cell Surface Antigen T3/Leu-4 $\epsilon$ Chain;T3E;T-Cell Surface Glycoprotein CD3 Epsilon Chain;T-Cell Surface Glycoprotein CD3 $\epsilon$ Chain;T-Cell Surface Antigen T3/Leu-4 Epsilon Chain;CD3E
Protein Construction:	Asp23-Asp126
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P07766
Molecular Weight:	45-60 KDa (reducing condition)
AA Sequence:	Asp23-Asp126

### QC Testing

Biological Activity:	Loaded Anti-Human CD3E mAb-mFc on AMC Biosensor, can bind Human CD3E-Fc-6His&C-Fc-Flag with an affinity constant of 0.6 nM as determined in BLI assay. (Regularly tested)
Purity:	Greater than 95% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.1 ng/ $\mu$ g (1 EU/ $\mu$ g) as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu$ m filter, containing PBS, pH 7.4.

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100  $\mu$ g/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:

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 CD3  $\epsilon$  Chain (CD3 $\epsilon$ ) is a single-pass type I membrane protein. CD3 $\epsilon$  contains 1 Ig-like (immunoglobulin-like) domain and 1 ITAM domain. CD3 $\epsilon$  is a polypeptide encoded by the CD3E gene on chromosome 11 in humans. The T cell receptor-CD3 complex (TCR/CD3 complex) is involved in T-cell development and several intracellular signal-transduction pathways. This complex is critical for T-cell development and function, and represents one of the most complex transmembrane receptors. The T cell receptor-CD3 complex is

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unique in having ten cytoplasmic immunoreceptor tyrosine-based activation motifs (ITAMs). TCR/CD3 complex plays an important role in coupling antigen recognition to several intracellular signal-transduction pathways.

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