

Recombinant Human CD3E Protein, C-hFc&FLAG-tagged

Product Information

Cat	IMP-1968
Official Symbol	CD3E
Product Overview	Recombinant human CD3E (NP_000724.1) (Met1-Asp126) was expressed with the C-terminal flag-tagged Fc region of human IgG1 at the C-terminus.
Description	<p>T-cell surface glycoprotein CD3 epsilon chain, also known as CD3E, is a single-pass type I membrane protein. CD3E contains 1 Ig-like (immunoglobulin-like) domain and 1 ITAM domain. CD3E, together with CD3-gamma, CD3-delta and CD3-zeta, and the T-cell receptor alpha/beta and gamma/delta heterodimers, forms the T cell receptor-CD3 complex. The CD3 epsilon subunit of the T cell receptor (TCR) complex contains two defined signaling domains, a proline-rich sequence and an immune tyrosine activation motifs (ITAMs), and this complex undergoes a conformational change upon ligand binding that is thought to be important for the activation of T cells. In the CD3 epsilon mutant mice, all stages of T cell development and activation that are TCR-dependent were impaired, but not eliminated, including activation of mature naïve T cells with the MHCII presented superantigen, staphylococcal enterotoxin B, or with a strong TCR cross-linking antibody specific for either TCR-Cbeta or CD3 epsilon. T cell receptor-CD3 complex plays an important role in coupling antigen recognition to several intracellular signal-transduction pathways. This complex is critical for T-cell development and function, and represents one of the most complex transmembrane receptors. CD3E plays an essential role in T-cell development, and defects in CD3E gene cause severe immunodeficiency. Homozygous mutations in CD3D and CD3E genes lead to a complete block in T-cell development and thus to an early-onset severe combined immunodeficiency phenotype.</p>
Expression System	HEK293
Species	Human
Tag	C-hFc&FLAG
Predicted N Terminal	Asp 23
Form	Lyophilized from sterile PBS, pH 7.4, 5 % trehalose, 5% mannitol and 0.01% Tween80.
Molecular Mass	The recombinant human CD3E consists of 353 amino acids and predicts a molecular mass of 39.8 kDa. As a result of glycosylation, it migrates as an approximately 42.3 kDa band in SDS-PAGE under reducing conditions.
Protein length	Met1-Asp126

Endotoxin	<i>< 1.0 EU/μg of the protein as determined by the LAL method</i>
Purity	<i>> 95 % as determined by SDS-PAGE</i>
Storage	<i>Samples are stable for up to twelve months from date of receipt at -20 to -80 centigrade. Store it under sterile conditions at -20 to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.</i>
Reconstitution	<i>A hardcopy of COA with reconstitution instruction is sent along with the products. Please refer to it for detailed information.</i>