# Recombinant Human CD247 Protein, C-His-tagged

**Cat. No.** CD247-171H **Lot. No.** (See product label)

## SPECIFICATION

| | |
|---|---|
| **Product Overview** | Recombinant Human CD247 Protein with C-His tag was expressed in E. coli. |
| **Species** | Human |
| **Source** | E.coli |
| **Description** | When T cells encounter antigens via the T cell receptor (TCR), information about the quantity and quality of antigens is relayed to the intracellular signal transduction machinery. This activation process depends mainly on CD3 (Cluster of Differentiation 3), a multiunit protein complex that directly associates with the TCR. CD3 is composed of four polypeptides: ζ, γ, ε and δ. Each of these polypeptides contains at least one immunoreceptor tyrosine-based activation motif (ITAM). Engagement of TCR complex with foreign antigens induces tyrosine phosphorylation in the ITAM motifs and phosphorylated ITAMs function as docking sites for signaling molecules such as ZAP-70 and p85 subunit of PI-3 kinase. TCR ligation also induces a conformational change in CD3ε, such that a proline region is exposed and then associates with the adaptor protein Nck. The CD3ζ invariant chain is a type-I transmembrane protein that exists in the TCR signaling complex as a disulfide-linked homodimer. The cytoplasmic tail of each CD3ζ monomer contains three distinct ITAM motifs, each containing two tyrosine residues. Phosphorylation of CD3ζ ITAM tyrosine residues, including Y142, is driven by recruitment of the Lck and Fyn tyrosine kinases to the TCR. Lck/Fyn-mediated ITAM phosphorylation creates docking sites that promote the SH2 domain-dependent recruitment and activation of ZAP-70, which drives amplification of signaling events downstream of the TCR that facilitate T cell |

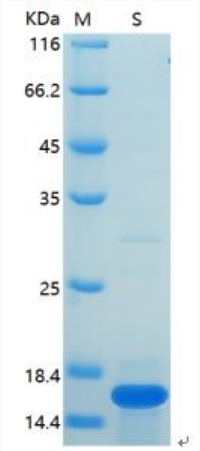
Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

| | |
|---|---|
| | activation. Phosphorylation of a pool of p16 CD3ζ leads to the generation of p21 and p23 species, which differ in the degree of ITAM phosphorylation. It has been proposed that the ratio of p21/p23 contributes to regulating the amplitude of T cell activation. CD3ζ plays an important role in the assembly and surface expression of the TCR complex. Indeed, research studies have demonstrated that CD3ζ is degraded in response to Ag-dependent TCR stimulation as a mechanism to tightly control T cell activation. |
| **Molecular Mass** | ~12 kDa |
| **AA Sequence** | RVKFSRSADAPAYQQGQNQLYNELNLGRREEYDVLDKRRGRDPEMGGKPQRRKNPQEGLYNELQKDKMAEAYSEIGMKGERRRGKGHDGLYQGLSTATKDTYDALHMQALPPR |
| **Purity** | Transferred into competent cells and the supernatant was purified by NI column affinity chromatography and the purity is > 85% (by SDS-PAGE). |
| **Notes** | For research use only, not for use in diagnostic procedure. |
| **Storage** | Store at 4 centigrade short term. Aliquot and store at -20 centigrade long term. Avoid freeze-thaw cycles. |
| **Concentration** | ≥0.5 mg/mL |
| **Storage Buffer** | PBS, 4M Urea, pH7.4 |

## GENE INFORMATION

| | |
|---|---|
| **Gene Name** | CD247 CD247 molecule [ Homo sapiens (human) ] |
| **Official Symbol** | CD247 |

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

| | |
|---|---|
| **Synonyms** | CD247; CD247 molecule; CD3Z, CD3z antigen, zeta polypeptide (TiT3 complex) , CD247 antigen; T-cell surface glycoprotein CD3 zeta chain; CD3H; CD3Q; CD3zeta chain; TCR zeta chain; CD247 antigen, zeta subunit; T-cell receptor T3 zeta chain; CD3Z antigen, zeta polypeptide (TiT3 complex); T-cell antigen receptor complex, zeta subunit of CD3; T3Z; CD3Z; TCRZ; CD3-ZETA; |
| **Gene ID** | 919 |
| **mRNA Refseq** | NM_000734 |
| **Protein Refseq** | NP_000725 |
| **MIM** | 186780 |
| **UniProt ID** | P20963 |
| **SDS-PAGE** | <br>SDS-PAGE Result |

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA