

## PE Human CD3 (C-Fc)

|                           |                                        |
|---------------------------|----------------------------------------|
| <b>Catalog Number:</b>    | 810601, 810602                         |
| <b>Size:</b>              | 25 ug, 100 ug                          |
| <b>Target Name:</b>       | CD3-epsilon, FLJ18683, T3E, TCRE, CD3E |
| <b>Regulatory Status:</b> | RUO                                    |

## PRODUCT DETAILS

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| <b>Application:</b>           | Flow Cytometry                                                                                                                                                 |
| <b>Format:</b>                | Liquid, PE                                                                                                                                                     |
| <b>Expression Host:</b>       | CHO                                                                                                                                                            |
| <b>Species:</b>               | Human                                                                                                                                                          |
| <b>Sources:</b>               | Recombinant Human CD3 Protein ( Asp 23- Asp126) with C-terminus Fc-tag is expressed in CHO cell and conjugated to PE.                                          |
| <b>Accession Number:</b>      | P07766                                                                                                                                                         |
| <b>Molecular Weight:</b>      | The protein has a predicted molecular weight of 37.9 kDa. Under DTT-reducing conditions, it migrates at approximately 45 kDa on SDS-PAGE prior to conjugation. |
| <b>Affinity Tag:</b>          | C-Fc                                                                                                                                                           |
| <b>Formulation:</b>           | 1xPBS buffer, pH7.4, 0.09% NaN3 with a carrier protein                                                                                                         |
| <b>Endotoxin level:</b>       | Not tested                                                                                                                                                     |
| <b>Protein Concentration:</b> | 25µg size is bottled at 0.1mg/mL concentration. 100 µg size is bottled at lot specific concentration.                                                          |
| <b>Storage and Handling:</b>  | Briefly centrifuge the vial upon receipt. An unopened vial may be stored at 2-8°C for up to six months.                                                        |

## BACKGROUND INFORMATION

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CD3ε is a critical component of the T cell receptor (TCR)-CD3 complex, a transmembrane receptor essential for antigen recognition and T cell activation. It is a single-pass type I membrane glycoprotein containing an Ig-like extracellular domain and a cytoplasmic ITAM motif, which initiates intracellular signaling upon phosphorylation by Src family kinases (e.g., LCK, FYN). The TCR-CD3 complex includes two CD3ε chains, CD3γ, CD3δ, CD3ζ, and a TCR α/β or γ/δ heterodimer. CD3ε is expressed on all mature T cells, NK T cells, and some thymocytes, playing a vital role in T cell development and immune response. Mutations in CD3E disrupt T cell maturation and can lead to severe combined immunodeficiency (SCID), as well as increased susceptibility to autoimmune diseases such as type I diabetes.