# Data Sheet (Cat.No.TMAY-01395A)

TargetMol

## Anti-CD3 epsilon/CD3e Antibody-APC (6O384)

### Product Details

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| Ig Type: | Mouse IgG2a |
| Reactivity: | Human |
| Conjugation: | APC |
| Clone: | 6O384 |
| Purification: | Protein A |

### Applications

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| Verified Activity: | Flow cytometric analysis of Human CD3 expression on human peripheral blood lymphocytes. Cells were stained with APC-conjugated anti-Human CD3 and PerCP-Cy™5.5 conjugated anti-Human CD19 (BD Pharmingen™ Cat. No. 561295). The dot plots were derived from events with the forward and side light-scatter characteristics of viable lymphocytes. |
| Application: | FCM |
| Recommended | 1 μl/Test, 0.1 mg/ml |

### Properties

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| Stability & Storage: | Store at 2°C-8°C for 12 months, do not freeze. Keep away from direct sunlight. Sodium azide is toxic to cells and should be disposed of properly. Flush with large volumes of water during disposal. |
| Shipping: | Shipping with blue ice. |

### Antigen Details

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| Immunogen: | Recombinant Protein: Human CD3e / CD3 epsilon protein (TMPY-01191) |
| Antigen Species: | Human |
| Synonyms: | CD3e molecule, ε (CD3-TCR complex);CD3e molecule, epsilon (CD3-TCR complex);CD3 ε/CD3e |
| Biology Area: | ITIM/ITAM Immunoreceptors and Related Molecules |

### Research Background

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.Cancer ImmunotherapyImmune CheckpointImmunotherapyTargeted Therapy



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