

## Anti-CD3 epsilon/CD3e Antibody-PE (60384)

## Product Details

Ig Type:	Mouse IgG2a
Reactivity:	Human
Conjugation:	PE
Clone:	60384
Purification:	Protein A

## Applications

Verified Activity:	Flow cytometric analysis of Human CD3 expression on human peripheral blood lymphocytes. Cells were stained with PE-conjugated anti-Human CD3 and APC conjugated anti-Human CD19 (BD Pharmingen™ Cat. No. 555415). 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

Stability & Storage:	Store at 2°C-8°C for 12 months, do not freeze. Keep away from direct sunlight.
Shipping:	Shipping with blue ice.

## Antigen Details

Immunogen:	Recombinant Protein: Human CD3e / CD3 epsilon protein (TMPY-01191)
Antigen Species:	Human
Synonyms:	CD3e molecule, ε (CD3-TCR complex);CD3 ε/CD3e;CD3e molecule, epsilon (CD3-TCR complex)
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

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