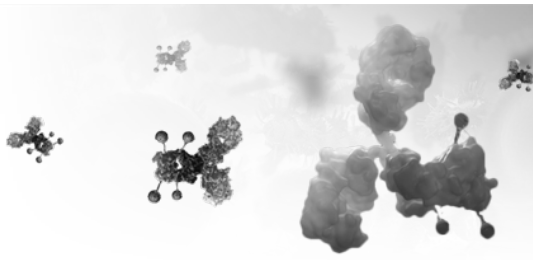

Armenian Hamster Anti-Mouse CD3ε Monoclonal antibody, clone 145-2C11 (CABT-L4313)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Product Overview	The 145-2C11 monoclonal antibody reacts with mouse CD3ε, a 20 kDa transmembrane cell-surface protein that belongs to the immunoglobulin superfamily. CD3ε is one of five polypeptide chains that combine to form the TCR complex. CD3ε is expressed on T lymphocytes, NK-T cells, and to varying degrees on developing thymocytes. CD3 plays roles in TCR signaling, T lymphocyte activation, and antigen recognition. The 145-2C11 antibody has been shown to induce T lymphocyte activation, proliferation, and apoptosis in vitro via binding and stimulating the TCR. When used in vivo the antibody is reported to produce T cell activation, anergy, or death. Activation of resting T cells in vivo results in cytokine release and subsequent toxicity caused by Ab-mediated cross-linking of T cells and Fcγ receptor (FcR)-bearing cells. For this reason, the non-FcR-binding 145-2C11 f(ab')2 fragments are more commonly used for in vivo applications. The 145-2C11 antibody has been reported to block the binding of the 17A2 antibody to CD3ε+ T lymphocytes.
Target	Mouse CD3ε
Immunogen	Mouse BM10-37 cytotoxic T cells
Isotype	IgG1
Source/Host	Armenian Hamster
Species Reactivity	Mouse
Clone	145-2C11
Purification	Protein A purified. Purity>95%. Determined by SDS-PAGE

45-1 Ramsey Road, Shirley, NY 11967, USA
Email: info@creative-diagnostics.com
Tel: 1-631-624-4882 Fax: 1-631-938-8221

Conjugate	Functional Grade
Applications	in vitro T cell stimulation/activation, IF, FC, WB, in vivo T cell depletion (see description)
Molecular Weight	150 kDa
Format	0.2 μM filtered liquid. Purified from tissue culture supernatant in an animal free facility
Concentration	Lot specific
Size	5 mg
Buffer	PBS, pH 7.0. Contains no stabilizers or preservatives. [low endotoxin azide-free] Endotoxin level: <2EU/mg (<0.002EU/μg). Determined by LAL gel clotting assay Related dilution buffer: CABT-LB04
Preservative	None
Storage	The antibody solution should be stored undiluted at 4°C, and protected from prolonged exposure to light. Do not freeze.
Ship	Wet ice

BACKGROUND

Introduction	The protein encoded by this gene is the CD3-epsilon polypeptide, which together with CD3-gamma, -delta and -zeta, and the T-cell receptor alpha/beta and gamma/delta heterodimers, forms the T-cell receptor-CD3 complex. This complex plays an important role in coupling antigen recognition to several intracellular signal-transduction pathways. The genes encoding the epsilon, gamma and delta polypeptides are located in the same cluster on chromosome 11. The epsilon polypeptide plays an essential role in T-cell development. Defects in this gene cause immunodeficiency. This gene has also been linked to a susceptibility to type I diabetes in women.
Keywords	CD3, CD3 epsilon

GENE INFORMATION

Official Symbol	CD3e molecule, epsilon (CD3-TCR complex)
Synonyms	CD3, CD3 epsilon
References	Glasner, A., et al. (2018). "NKp46 Receptor-Mediated Interferon-gamma Production by Natural Killer Cells Increases Fibronectin 1 to Alter Tumor Architecture and Control Metastasis."

45-1 Ramsey Road, Shirley, NY 11967, USA
Email: info@creative-diagnostics.com
Tel: 1-631-624-4882 Fax: 1-631-938-8221

Immunity 48(1): 107-119 e104. PubMed;Xu, H., et al. (2015). "Regulation of bifurcating B cell trajectories by mutual antagonism between transcription factors IRF4 and IRF8." Nat Immunol. doi: 10.1038/ni.3287. PubMed;Bertin, S., et al. (2014). "The ion channel TRPV1 regulates the activation and proinflammatory properties of CD4(+) T cells." Nat Immunol 15(11): 1055-1063. PubMed;Rabenstein, H., et al. (2014). "Differential kinetics of antigen dependency of CD4+ and CD8+ T cells." J Immunol 192(8): 3507-3517. PubMed;Tang, W., et al. (2014). "The oncoprotein and transcriptional regulator Bcl-3 governs plasticity and pathogenicity of autoimmune T cells." Immunity 41(4): 555-566. PubMed

45-1 Ramsey Road, Shirley, NY 11967, USA
Email: info@creative-diagnostics.com
Tel: 1-631-624-4882 Fax: 1-631-938-8221