

## ARG22819 anti-CD3 epsilon antibody [CD3-12]

Package: 100 µg  
Store at: -20°C

### Summary

Product Description	Rat Monoclonal antibody [CD3-12] recognizes CD3 epsilon CD3 epsilon antibody, clone CD3-12, recognizes human CD3e, and has a very broad species crossreactivity for the CD3 epsilon marker. CD3 is a multimeric protein complex composed of four distinct polypeptide chains that associate with the T cell receptor (TCR).
Tested Reactivity	Hu, Ms, Bov, Cat, Chk, Dog, Duck, Hrs, Pig, R. Mk, Rb, Xenopus
Tested Application	FACS, ICC/IF, IHC-Fr, IHC-P, WB
Host	Rat
Clonality	Monoclonal
Clone	CD3-12
Isotype	IgG1
Target Name	CD3 epsilon
Species	Human
Immunogen	Synthetic peptide derived from cytoplasmic epitope of CD3 epsilon. (ERPPPVPNPDYEPK)
Conjugation	Un-conjugated
Alternate Names	T-cell surface antigen T3/Leu-4 epsilon chain; T3E; TCRE; T-cell surface glycoprotein CD3 epsilon chain; IMD18; CD antigen CD3e

### Application Instructions

Application table	Application	Dilution
	FACS	1:50 - 1:100
	ICC/IF	Assay-dependent
	IHC-Fr	1:100
	IHC-P	1:100
	WB	Assay-dependent

**Application Note**

FACS: Membrane permeabilization by Saponin or Leucoperm is required for this application.  
 IHC-P: Antigen Retrieval: Boil tissue section in EDTA buffer (pH 9.0).  
 \* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

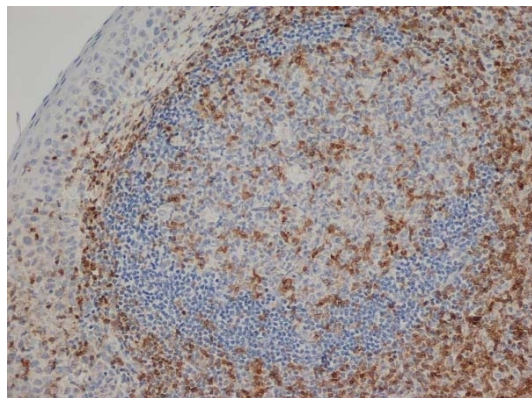
### Properties

Form	Liquid
Purification	Purification with Protein G.
Buffer	PBS and 0.09% Sodium azide

Preservative	0.09% Sodium azide
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

## Bioinformation

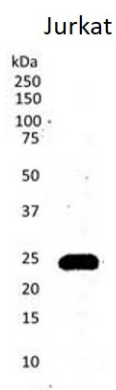
Gene Symbol	CD3E
Gene Full Name	CD3e molecule, epsilon (CD3-TCR complex)
Background	CD3 subunit complex is crucial in transducing antigen-recognition signals into the cytoplasm of T cells and in regulating the cell surface expression of the TCR complex. T cell activation through the antigen receptor (TCR) involves the cytoplasmic tails of the CD3 subunits CD3 gamma, CD3 delta, CD3 epsilon and CD3 zeta. These CD3 subunits are structurally related members of the immunoglobulins superfamily encoded by closely linked genes on human chromosome 11. The CD3 components have long cytoplasmic tails that associate with cytoplasmic signal transduction molecules. This association is mediated at least in part by a double tyrosine-based motif present in a single copy in the CD3 subunits. CD3 may play a role in TCR-induced growth arrest, cell survival and proliferation.
Function	CD3: Part of the TCR-CD3 complex present on T-lymphocyte cell surface that plays an essential role in adaptive immune response. When antigen presenting cells (APCs) activate T-cell receptor (TCR), TCR-mediated signals are transmitted across the cell membrane by the CD3 chains CD3D, CD3E, CD3G and CD3Z. All CD3 chains contain immunoreceptor tyrosine-based activation motifs (ITAMs) in their cytoplasmic domain. Upon TCR engagement, these motifs become phosphorylated by Src family protein tyrosine kinases LCK and FYN, resulting in the activation of downstream signaling pathways (PubMed:2470098). In addition of this role of signal transduction in T-cell activation, CD3E plays an essential role in correct T-cell development. Initiates the TCR-CD3 complex assembly by forming the two heterodimers CD3D/CD3E and CD3G/CD3E. Participates also in internalization and cell surface down-regulation of TCR-CD3 complexes via endocytosis sequences present in CD3E cytosolic region (PubMed:10384095, PubMed:26507128). [UniProt]
Highlight	<p>Related Antibody Duos and Panels:  <a href="#">ARG30326 Inflammatory Cell Antibody Panel (for mouse)</a></p> <p>Related products:  <a href="#">CD3 antibodies</a>; <a href="#">CD3 ELISA Kits</a>; <a href="#">CD3 Duos / Panels</a>; <a href="#">CD3 recombinant proteins</a>; <a href="#">Anti-Rat IgG secondary antibodies</a>;</p> <p>Related news:  <a href="#">Tumor-Infiltrating Lymphocytes (TILs)</a>  <a href="#">New antibody panels and duos for Tumor immune microenvironment</a>  <a href="#">Exploring Antiviral Immune Response</a></p>
Research Area	Cancer antibody; Developmental Biology antibody; Immune System antibody; Lymphocyte Marker antibody; Inflammatory Cell Marker antibody; T-cell Marker antibody; T-cell infiltration Study antibody; Tumor-infiltrating Lymphocyte Study antibody
Calculated Mw	23 kDa



ARG22819 anti-CD3 epsilon antibody [CD3-12] IHC-P image

Immunohistochemistry: Formalin-fixed and paraffin-embedded Human tonsil stained with ARG22819 anti-CD3 epsilon antibody [CD3-12]. Antigen Retrieval: Boil tissue section in EDTA buffer (pH 9.0).

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ARG22819 anti-CD3 epsilon antibody [CD3-12] WB image

Western blot: Jurkat human acute T-cell leukemia whole cell lysate stained with ARG22819 anti-CD3 epsilon antibody [CD3-12].

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