EXBIO Antibodies

PRODUCT DATA SHEET

1F-568-C100

Monoclonal Antibody to CD3 zeta (CD247) Fluorescein (FITC) conjugated (0.1 mg)

Clone: H146-968

Isotype: Hamster IgG

Specificity: The Armenian hamster antibody H146-968 reacts with CD3 zeta chain (CD247), which is a component of TCR/CD3 complex expressed on T cells.

Immunogen: Synthetic peptide corresponding to amino acids 151-164 of mouse CD3 zeta.

Species Reactivity: Human, Mouse

Preparation: The purified antibody is conjugated with Fluorescein isothiocyanate (FITC) under optimum conditions. The reagent is free of unconjugated FITC.

Concentration: 1 mg/ml

Storage Buffer: Phosphate buffered saline (PBS) with 15 mM sodium azide, approx. pH 7.4

Storage / Stability: Store in the dark at 2-8°C. Do not freeze. Avoid prolonged exposure to light.
Do not use after expiration date stamped on vial label.
Short-term exposure to room temperature should not affect the quality of the reagent. However, if reagent is stored under any conditions other than those specified, the conditions must be verified by the user.

Usage: The reagent is designed for Flow Cytometry analysis.
Suggested working concentration is 2 µg/ml. Indicated dilution is recommended starting point for use of this product. Working concentrations should be determined by the investigator.

Expiration: See vial label

Lot Number: See vial label

Background: CD3 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 (CD247). These CD3 subunits are structurally related members of the immunoglobulins super family 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.

For laboratory research only, not for drug, diagnostic or other use.

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References:

*Huang Y, Wange RL: T cell receptor signaling: beyond complex complexes. J Biol Chem. 2004 Jul 9;279(28):28827-30.
*Kuhns MS, Davis MM, Garcia KC: Deconstructing the form and function of the TCR/CD3 complex. Immunity. 2006 Feb;24(2):133-9.
*Alarcón B, Swamy M, van Santen HM, Schamel WW: T-cell antigen-receptor stoichiometry: pre-clustering for sensitivity. EMBO Rep. 2006 May;7(5):490-5.
*Rozdzial MM, Kubo RT, Turner SL, Finkel TH: Developmental regulation of the TCR zeta-chain. Differential expression and tyrosine phosphorylation of the TCR zeta-chain in resting immature and mature T lymphocytes. J Immunol. 1994 Aug 15;153(4):1563-80.
*Kishimoto H, Kubo RT, Yorifuji H, Nakayama T, Asano Y, Tada T: Physical dissociation of the TCR-CD3 complex accompanies receptor ligation. J Exp Med. 1995 Dec 1;182(6):1997-2006.
*Bäckström BT, Hausmann BT, Palmer E: Signaling efficiency of the T cell receptor controlled by a single amino acid in the beta chain constant region. J Exp Med. 1997 Dec 1;186(11):1933-8.
*Kosugi A, Saitoh S, Noda S, Yasuda K, Hayashi F, Ogata M, Hamaoka T: Translocation of tyrosine-phosphorylated TCRzeta chain to glycolipid-enriched membrane domains upon T cell activation. Int Immunol. 1999 Sep;11(9):1395-401.
*Iida T, Ohno H, Nakaseko C, Sakuma M, Takeda-Ezaki M, Arase H, Kominami E, Fujisawa T, Saito T: Regulation of cell surface expression of CTLA-4 by secretion of CTLA-4-containing lysosomes upon activation of CD4+ T cells. J Immunol. 2000 Nov 1;165(9):5062-8.
*Kikuchi-Maki A, Catina TL, Campbell KS: Cutting edge: KIR2DL4 transduces signals into human NK cells through association with the Fc receptor gamma protein. J Immunol. 2005 Apr 1;174(7):3859-63.
*Doyon L, Hanna Z, Jolicoeur P, Sékaly RP: Early expression of human CD4 delays thymic differentiation in transgenic mice. Res Immunol. 1994 Jan;145(1):5-16.
*Scumpia PO, Delano MJ, Kelly-Scumpia KM, Weinstein JS, Wynn JL, Winfield RD, Xia C, Chung CS, Ayala A, Atkinson MA, Reeves WH, Clare-Salzler MJ, Moldawer LL: Treatment with GITR agonistic antibody corrects adaptive immune dysfunction in sepsis. Blood. 2007 Nov 15;110(10):3673-81.

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