



HISTOPRIME[®]

CatNo E053

CD3, T cells

Lot: See Label

Storage: +2 to +8 °C

Exp. Date: See Label

Polyclonal Antibody against CD3, (T cells)

Specificity

The CD3 complex is experimented on the cell membrane of T lymphocytes. The complex consists of several protein subunits (including gamma, delta, epsilon) associated with the T cell receptor (TCR). The CD3- molecules are involved in signal transduction after antigen binding to the TCR.

CD3 is experimented by cortical thymocytes and by peripheral T lymphocytes. No other peripheral cells experiment CD3 (except possibly Purkinje cells in the cerebellum).

Contents

Reagents sufficient for about 50-100 tissue sections
1 dropper bottle **HISTOPRIME[®] CD3, T cells** (Bottle, 5 ml)

Application

The polyclonal antibody E053 recognizes the cytoplasmic part of the epsilon subunits of the CD3 complex on thymocytes and on peripheral T lymphocytes and, in contrast to many monoclonal antibodies of the same specificity, is suitable for cryostat material and paraffin sections.

The E053 antibody is predominantly used for the differential diagnosis of T-cell lymphomas.

Fusion Partners

Synthetic human epsilon-chain CD3 peptide (AS 156-168) was used to immunize rabbits after coupling to thyroglobulin. Anti-CD3 antibodies were isolated from rabbit serum by affinity chromatography on immobilized CD3

E053-230109-1/2





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Characterization

Antigen

Prokaryotic fusion protein corresponding to the human CD3 epsilon chain.

Specificity

Epsilon subunit of the human CD3 complex Collagen IV alpha1 AND/or alpha 2-chain in connective tissue, basement membranes

Abnormal Tissues

T-cell lymphomas

Clone

Polyclonal

Isotype

Rabbit Ig

Pretreatment

Enzymatic pretreatment with 0.01% Pronase (LINARIS CatNo E110) 10 min at room temperature or better HistoSafe Enhancer Unmasking Solution (LINARIS CatNo E7000) 20 min at 96°C

Incubation Period

1 hour at room temperature

Control Tissue

Tonsils

Application

Ready-to-use in PBS, BSA, NaN₃ (0.09%) pH 7.4(*) suitable on cryostat sections and on formalin-fixed, paraffin-embedded tissue sections.

**Recommended
Secondary
Reagents**

Alkaline Phosphatase Vectastain[®] ABC Rabbit IgG (Vector CatNo AK-5001) and Substrate-Kit e.g. Vector[®] Red (Vector CatNo SK-5100).

Peroxidase Vectastain[®] ABC-Elite Rabbit IgG (Vector CatNo PK-6101) and Peroxidase Substrate-Kit e.g. DAB (LINARIS CatNo E108) or HistoGreen (LINARIS CatNo E109).

References

1. Chetty R and Gatter K. CD3: structure, function, and role of immunostaining in clinical practice. *Journal of Pathology*. 173: 303-307 (1994).
2. Clark E A and Ledbetter J A. Leukocyte cell surface enzymology: CD45 (LCA, T200) is a protein tyrosine phosphatase. *Immunology Today*. 10: 225-28 (1989).
3. Clevers H, Alarcon B, Wileman T, et al.. The T cell receptor/CD3 complex: a dynamic protein ensemble. *Annual Review of Immunology*. 6: 629-662 (1988).
4. Clevers H, Dunlap S and Terhorst C. The transmembrane orientation of the epsilon chain of the TcR/CD3 complex. *European Journal of Immunology*. 18: 705-710 (1988).
5. Campana D, Thompson J S, Amlot P, et al.. The cytoplasmic expression of CD3 antigens in normal and malignant cells of the T lymphoid lineage. *Journal of Immunology*. 138: 648-655 (1987).
6. Denning S M, Tuck D T, Singer K H, et al.. Activation of human thymocytes via CD3 and CD2 molecules. In: McMichael AJ, et al.. eds. *Leukocyte Typing III, White Cell Differentiation Antigens*. Oxford-New York-Tokyo. Oxford University Press. 144-147 (1987).
7. Meuer S C, Acuto O, Hussey R E, et al.. Evidence for the T3-associated 90k heterodimer as the T cell antigen receptor. *Nature*. 303: 808-810 (1983).
8. Beverley P C L and Callard R E. Distinctive functional characteristics of human T lymphocytes defined by E rosetting or a monoclonal anti-T cell antibody. *European Journal of Immunology*. 11: 329-334 (1981).

Differential identification is aided by the results from a panel of antibodies. Interpretation must be made within the context of the patient's clinical history and other diagnostics tests by a qualified pathologist.

(*)Note E053 contains Sodium Azide; take adequate precautions!

() With cryostat material there is a risk that the easily soluble S-100 protein will be extracted and therefore not detected. In this case, we recommend fixing with 2% formaldehyde on the slide.**

E053-230109-2/2

For Research use only. Not for use in diagnostic procedure

Manufacturer

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FIT FOR SCIENCE

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