

CD 3e

Cat.No. HS-413 103; Polyclonal rabbit antibody, 200 µl specific antibody (lyophilized)

Data Sheet

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| Reconstitution/ Storage | 200 µl specific antibody, lyophilized. Affinity purified with the immunogen. BSA and azide were added for stabilization. For reconstitution add 200 µl H ₂ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use. |
| Applications | IHC-P/FFPE: 1 : 100 |
| Immunogen | Synthetic peptide corresponding to AA 44 to 64 from mouse CD3e (UniProt Id: P22646) |
| Reactivity | Reacts with: mouse (P22646). No signal: human (P07766), rat (D4A5M2). Other species not tested yet. |
| Specificity | Specific for mouse CD 3e without cross-reactivity to human and rat CD 3e. |

TO BE USED IN VITRO / FOR RESEARCH ONLY
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Cluster of differentiation 3 (CD3) is a defining feature of cells belonging to the T cell lineage. It is composed of the four subunits CD3 gamma, CD3 delta, **CD3 epsilon (CD3e)** and CD3 zeta, which form a multimeric protein complex. This complex associates with the T cell receptor (TCR) and serves as a T cell co-receptor.

The CD3 molecules contain immunoreceptor tyrosine-based activation motifs (ITAMs) that serve as the nucleating point for the intracellular signal transduction machinery upon TCR engagement. TCR/CD3 signaling is central to the initiation of antigen-specific T cell responses to pathogens and vaccines, as well as transplanted tissues, tumors, and autoantigens. CD3 is initially expressed in the cytoplasm of pro-thymocytes. During T cell maturation the expression of CD3 migrates to the cell-membrane. The specific appearance at all stages of T cell development make CD3 a useful immunohistochemical marker for T cells in tissue sections.

In the clinical setting, CD3 is a relevant marker for the classification of malignant lymphomas and leukemias as the antigen remains present in almost all T-cell lymphomas and leukemias. It can also be used to detect T cells in celiac disease, lymphocytic and collagenous colitis.

Selected General References

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