Anti-CD8 / DIA-TC8
Mouse monoclonal anti-T cell marker (cytotoxic T cells) Clone TC8

Product Information

Catalog No.:	**DIA-TC8** (500µl) **DIA-TC8-M** (100µl)
Clone:	TC8
Isotype:	Mouse IgG2a/κ
Specificity:	CD8
Immunogen:	Recombinant peptide of human CD8
Physical State:	Lyophilized powder
Species Reactivity:	Human
Positive Control:	Tonsil
Visualization:	Membranous

Reconstitution:	DIA-TC8, restore to 500 µl (DIA-TC8-M, restore to 100 µl) Reconstitute with sterile distilled water by gentle shaking for 10 minutes
Presentation:	In PBS with 1% BSA, 0.05% NaN3, pH 7.4. Antibody purified from culture supernatant
Applications:	Immunohistochemistry (IHC), standard formalin-fixed paraffin sec
Dilutions:	1:100 - 1:200 IHC-P (General recommendation, validation of antibody performance/protocol is the responsibility of the end user. Positive/negative controls should be run simultaneously with patient specimen. Interpretation must be made by a qualified pathologist within the context of patient's clinical history/other diagnostic tests.)
Associated Antibodies	DIA-TG1, anti-TIGIT, clone TG1 DIA-R12, anti-CD112R, clone R12

Reactivity

Clone TC8 has been developed specifically for routine immunohistochemical (IHC) detection of CD8 in formalin-fixed paraffin-embedded tissue specimen. TC8 has been validated for the identification of CD8 positive tumor infiltrating T cells (TILs) in order to allow the detection of CD8 in the tumor microenvironment under pathological conditions.

The T-cell receptor (TCR) recognizes specific antigenic peptides on the surface of cancer and other target cells presented by HLA-I/β2m complexes. Binding to TCR induces a signalling transduction cascade, leading to execution of cytotoxic T lymphocyte (CTL) functions. Thus, CD8+ T cells are directly involved in antitumor cytotoxic responses, while inhibitory T-cell receptors such as PD-1, CTLA-4 and TIGIT are activated by the immunosuppressive tumor microenvironment with the aim to inactivate tumor-infiltrating lymphocytes (TILs). The most effective current cancer immunotherapies include immune checkpoint inhibition ICI and block T-cell inhibitory receptors. Moreover, effective blockade immunotherapy appears to be associated with the presence of CD8+ T cells.

Instructions for Use

Immunohistochemical staining of standard formalin-fixed paraffin sections

The antibody is suited for immunohistochemical staining using automated platforms (Ventana Discovery Ultra, Leica Bond RX, Dako autostainer Link 48). Deparaffinize and rehydrate according to standard procedures. Heat induced epitope retrieval (HIER) is required. For immunohistochemical detection different techniques can be used: Indirect immunoenzyme labeling with a secondary antibody conjugate, biotin/(strept)avidin-based detection, soluble enzyme immune complex or polymer-based detection. Use the antibody at 1:100-1:200 dilution. Find IHC-protocols at www.oncodianova.com.

Storage and Stability

Store the lyophilized antibody at 2-8°C. For long term storage freeze at -20°C, thus the antibody is stable for at least one year. As reconstituted liquid store at 2-8°C short term (several weeks). Avoid repeated freeze / thaw cycles.

Safety Notes

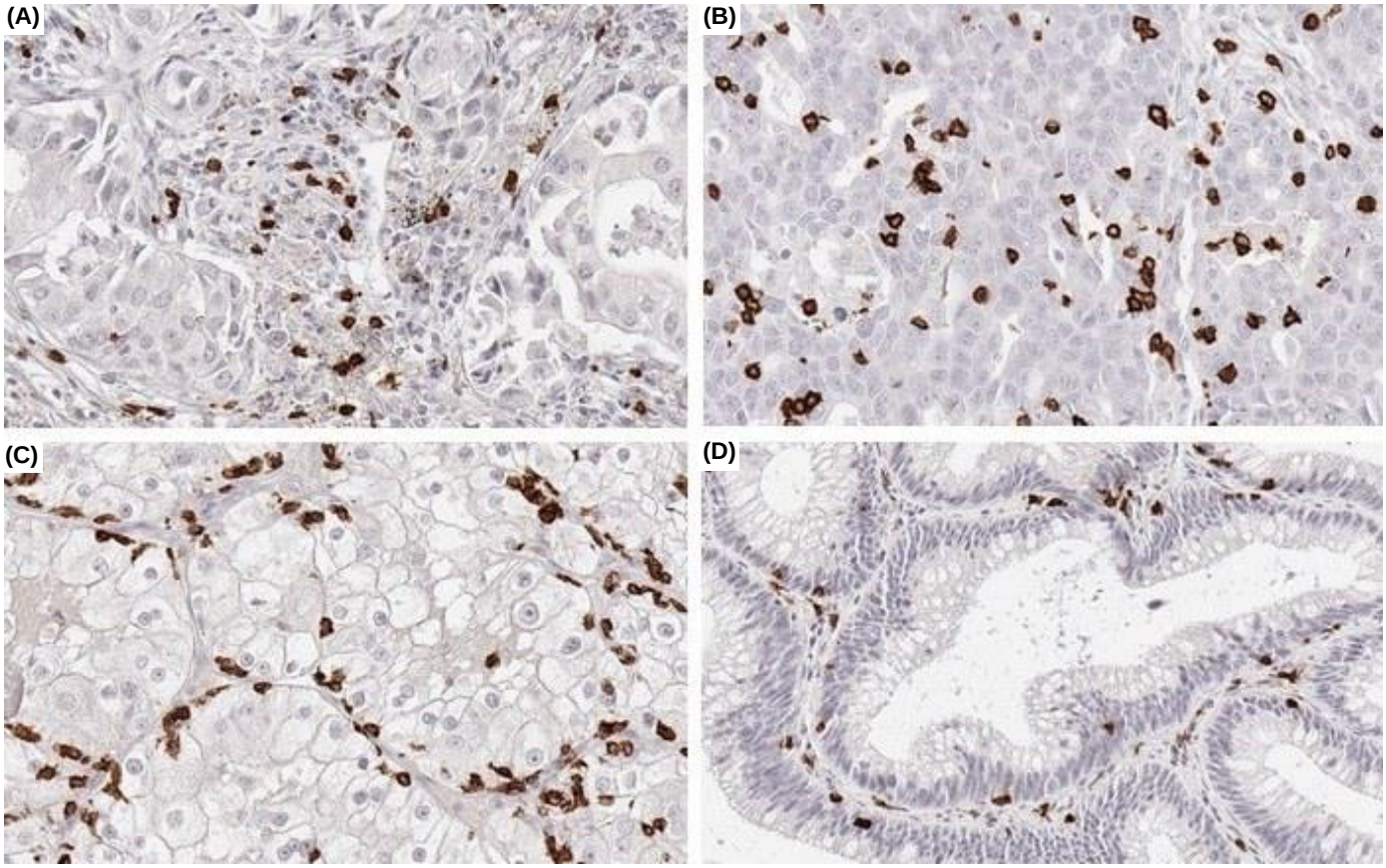
The material contains 0.05% sodium azide as preservative. Although the quantity of azide is very small, appropriate care should be taken when handling this material. Avoid skin and eye contact, inhalation and ingestion.

For research use only. Not for diagnostic or therapeutic use.

Figures

Immunohistochemistry of human CD8 in routine formalin-fixed paraffin-embedded tissue samples

A: Adenocarcinoma of the lung with marked infiltration by CD8 positive lymphocytes.
B: Dense infiltrate of CD8 positive lymphocytes in a serous carcinoma of the ovary.
C: Clear cell kidney cancer with high number of CD8 positive lymphocytes.
D: CD8 positive lymphocytes in a low grade tubular adenoma of the colon.



(pictures courtesy of Prof. Guido Sauter, Department of Pathology, University Hospital Eppendorf, Hamburg, Germany)

Specific references for clone TC8

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   DOI https://doi.org/10.1158/1538-7445.AM2020-3870
2. Simon et al. Prognostic role of CD112R, PD-1 and Ki67 expression in CD8+cytotoxic T cells in colorectal cancer. Proceedings: AACR Annual Meeting 2020; April 27-28, 2020 and June 22-24, 2020; Philadelphia, PA, Volume 80, Issue 16 Supplement, pp. 4970.
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3. Eichenauer, T. et al. High level of EZH2 expression is linked to high density of CD8-positive T-lymphocytes and an aggressive phenotype in renal cell carcinoma. World J Urol (2020).
   DOI https://doi.org/10.1007/s00345-020-03200-4
4. Fraune, C. et al. MMR Deficiency is Homogeneous in Pancreatic Carcinoma and Associated with High Density of Cd8-Positive Lymphocytes. Ann Surg Oncol 27, 3997–4006 (2020).
   DOI https://doi.org/10.1245/s10434-020-08209-y
5. Blessin et al. Prevalence of CD8+ cytotoxic lymphocytes in human neoplasms. Cellular Oncology 2020, 43: 421-430.
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