Anti-CD73 / DIA-KK3
Mouse monoclonal anti-CD73, CD73-adenosine checkpoint marker, Clone KK3

Product Information

Catalog No.:	**DIA-KK3** (500µl)
Clone:	KK3
Isotype:	Mouse IgG2b, κ
Specificity:	CD73
Immunogen:	Peptide of human CD73
Physical State:	Lyophilized powder
Species Reactivity:	Human
Positive Control:	Tonsil
Visualization:	Membranous

Reconstitution:	DIA-KK3, restore to 500 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 Antibody	DIA-TC8, anti-CD8, clone TC8

Reactivity

Clone KK3 has been developed and validated specifically for the immunohistochemical (IHC) detection of CD73 in routine FFPE human tissue specimen. Given the broad expression of ectonucleotidases and adenosine receptors, immunohistochemical (IHC) application of monoclonal antibody KK3 may help to develop a better understanding of cell- and tissue- specific roles.

CD73 and CD39 are cell surface enzymes that catabolize the breakdown of extracellular ATP into adenosine. As ectonucleosidases they play important roles in maintaining tissue and immune homeostasis through interfering with the extracellular purigeneric pathway. Since several labs independently have demonstrated an immunosuppressive role of CD73-adenosine in cancer, the CD73-adenosine axis has emerged as one of the most promising therapeutic targets in immuno-oncology.

Adenosine triphosphate (ATP) is the major source of energy for the cell. Malignant cells can release high levels of ATP (e.g. after damage by radiotherapy or chemotherapy). Extracellular ATP provokes inflammation by driving "purinergic signals" and plays a significant role in promoting anti-tumor responses. Many tumors express the ectonucleotidases CD39 and CD73 to scarve such proinflammatory mediators and generate immunosuppressive adenosine nucleosides.

Instructions for Use

Immunohistochemical staining of standard formalin-fixed paraffin sections

Deparaffinize and rehydrate according to standard procedures. Heat induced epitope retrieval (HIER) is required. Pretreatment in an autoclave at pH 7.8 is recommended (Tris-EDTA-citrate, pH 7.8, e.g. TEC-buffer). For biotin/(strept)avidin-based detection techniques (e.g. Vectastain® Elite® ABC-HRP-kit/AEC) use the antibody at 1:50 dilution. For a polymer-based detection technique use the antibody at 1:150 dilution, e.g. Dako EnVision™ detection system (Peroxidase/DAB), 30min, 37°C.

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

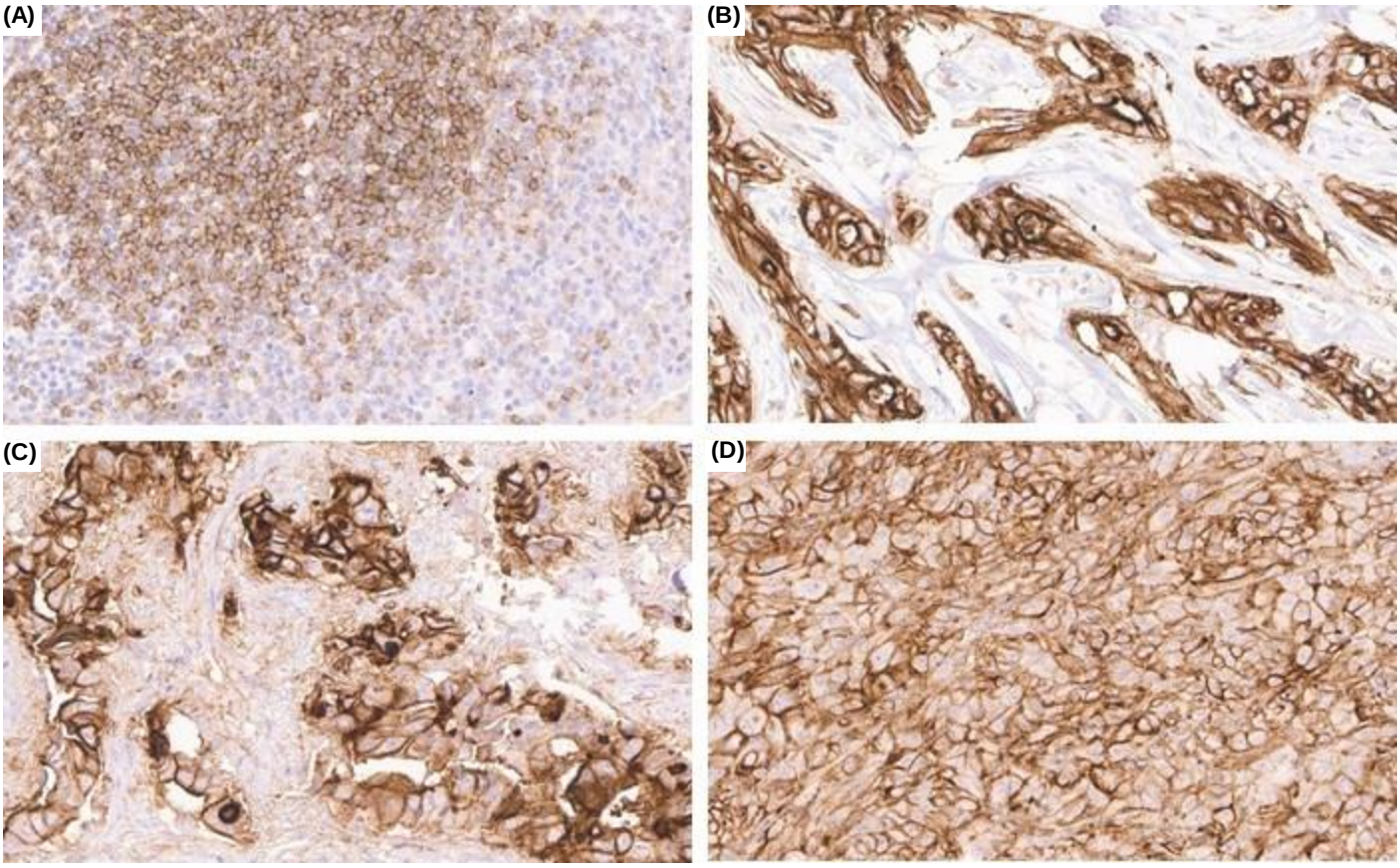
The material contains 0.05% sodium azide as preservative. Although the quantity of azide is very small, appropriate care should be taken when handling this material. Avoid skin and eye contact, inhalation and ingestion.

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

Figures

Immunohistochemistry of human CD73 in routine formalin-fixed paraffin-embedded tissue samples

A: CD73 immunohistochemistry in a tonsil.
B: Strong homogeneous CD73 immunostaining in a cholangiocellular carcinoma of the liver.
C: Membranous CD73 immunostaining in an adenocarcinoma of the lung shows apical predominance.
D: Prominent membranous CD73 positivity in a malignant melanoma.



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

References

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