CEA Antibody for IHC / CEACAM5 Immunohistochemistry Antibody [clone MSVA-465R] (V5853)

Catalog No.	Formulation	Size
V5853-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V5853-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Recombinant RABBIT MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	MSVA-465R
UniProt	P06731
Localization	Apical cell membrane, Cell membrane, Cell surface
Applications	Immunohistochemistry (FFPE) : 1:100-1:200
Limitations	This CEA Antibody for IHC / CEACAM5 Immunohistochemistry Antibody is available for research use only.

CEA Antibody for IHC Tissue Microarray (TMA) Multi-Tissue Expression Analysis. Immunohistochemistry analysis of Carcinoembryonic antigen (CEACAM5) expression in FFPE human tissue microarray (TMA) sections using CEA Antibody for IHC clone MSVA-465R demonstrates epithelial-restricted HRP-DAB brown staining in normal tissues, with signal localized predominantly to apical and luminal membranes of glandular structures in gastrointestinal and select epithelial tissues, while stromal and non-epithelial compartments remain negative. In cancer tissue microarrays, strong membranous and cytoplasmic staining is observed in tumor epithelial cells across multiple carcinoma types, including colorectal, gastric, pancreatic, and lung adenocarcinomas, with expanded staining patterns compared to normal epithelial polarity. The contrast between positive tumor cells and negative surrounding tissue supports CEA as an epithelial tumor marker in IHC-based analysis. Staining patterns observed across TMA cores are consistent with CEACAM5 expression profiles reported in reference datasets such as the Human Protein Atlas, and heat-induced epitope retrieval was performed prior to immunostaining to ensure optimal antigen detection in FFPE sections.

Description

Carcinoembryonic antigen (CEA), encoded by the CEACAM5 gene and also known as CD66e, is a glycosylated cell surface protein of the carcinoembryonic antigen-related cell adhesion molecule family that is widely expressed in epithelial tissues. In immunohistochemistry, CEA is classically detected at the apical and luminal surfaces of glandular epithelial cells, where it contributes to cell adhesion and epithelial organization. CEA Antibody for IHC is extensively used to evaluate epithelial differentiation in formalin-fixed, paraffin-embedded tissues, with its distinct membranous and luminal staining pattern providing clear visualization of glandular architecture and epithelial lineage in FFPE sections.

CEA antibody, also referred to as CEACAM5 antibody or CD66e antibody in the literature, recognizes an epithelial-associated glycoprotein that is frequently upregulated and redistributed in malignancy. This CEA Antibody for IHC is specifically optimized for Tissue Microarray (TMA)-based immunohistochemistry, enabling high-throughput assessment of staining patterns across large panels of normal and cancer tissues under standardized conditions. In normal tissue TMAs, staining is typically restricted to apical surfaces of epithelial cells in gastrointestinal tissues such as colon and stomach, while stromal, lymphoid, and mesenchymal compartments remain largely negative, providing a low-background context that enhances interpretation of tumor-associated staining.

In cancer tissue microarrays, CEA expression is frequently increased and shows expanded membranous and cytoplasmic HRP-DAB brown staining in a broad range of epithelial malignancies, including colorectal, gastric, pancreatic, and lung adenocarcinomas. Unlike the confined apical staining observed in normal tissues, tumor cells often exhibit diffuse and circumferential staining patterns, reflecting altered polarity and overexpression. CEA Antibody for IHC enables clear visualization of these changes across TMA cores, supporting differentiation of malignant epithelial cells from non-neoplastic tissue and aiding in identification of tumor origin in metastatic samples.

Tissue Microarray (TMA) analysis allows direct side-by-side comparison of CEA expression across hundreds of individual tissue cores, demonstrating consistent and reproducible tumor-associated staining patterns with minimal background in non-epithelial tissues. The performance of clone MSVA-465R in TMA-based IHC highlights its ability to generate strong, well-defined staining in positive tumor populations while maintaining specificity. The observed staining distribution aligns with established CEA expression data, including datasets such as the Human Protein Atlas, reinforcing confidence in its use for large-scale immunohistochemistry studies.

This antibody targets carcinoembryonic antigen in research applications requiring precise and interpretable immunohistochemical detection of epithelial tumor marker expression in FFPE tissue sections, making it well suited for studies of tumor classification, epithelial differentiation, and cancer-associated antigen expression.

This antibody is part of the CEA antibody collection, where additional CEACAM5 antibodies for immunohistochemistry can be explored.

This antibody is also part of a broader collection of IHC antibodies validated by tissue microarray analysis, supporting consistent staining across normal and cancer tissues.

Application Notes

1. Optimal dilution of the CEA Antibody for IHC / CEACAM5 Immunohistochemistry Antibody should be determined by the researcher.

2. This CEACAM5/Carcinoembryonic Antigen antibody is recombinantly produced by expression in human HEK293 cells.

3. Manual protocol: freshly cut tissue sections (less than 10 days between cutting and staining) were used. Heat-induced antigen retrieval was performed for 5 minutes in an autoclave at 121C using pH 7.8 target retrieval solution. The antibody was applied at a dilution of 1:150 and incubated at 37C for 60 minutes. Detection was performed using an EnVision-based visualization system according to the manufacturerÃ¢Â€Â™s instructions.

Immunogen

Recombinant full-length human Carcinoembryonic antigen protein was used as the immunogen for the CEACAM5/CEA antibody.

Storage

CEACAM5/CEA antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

Alternate Names

CEACAM5 antibody, CEA IHC antibody, CD66e antibody, carcinoembryonic antigen antibody, CEACAM5 immunohistochemistry antibody