

Target-Validated and Characterized IVD Antibodies for Anatomic Pathology

PRODUCT FOCUS -- CEACAM5 rabbit monoclonal antibody (clone ZR370)

Specifically recognizes human cell surface and cytoplasmic CEACAM5

CEACAM5 (Carcinoembryonic antigen-related cell adhesion molecule 5), also known as CEA (Carcinoembryonic antigen), is a glycoprotein that is expressed on the surface of various types of cells and cancers. It belongs to the CEA family of proteins and is encoded by the CEACAM5 gene.

CEACAM5 is particularly overexpressed in gastrointestinal tract cancers, such as colorectal, gastric and pancreatic cancers. CEACAM5 expression is found in >90% of colorectal cancers and 80% of pancreatic cancers and expression is found in lung cancers. To a lesser extent, CEACAM5 is expressed in breast, bladder, and ovarian cancers. Cancer that expresses CEACAM5 is associated with poor prognosis and increased risk of recurrence.

Since many common human cancers overexpress CEACAM5, it has been used as a potential target for cancer therapy. One approach to targeting CEACAM5 is through the use of

monoclonal antibodies. Some monoclonal antibodies targeting CEACAM5, such as labetuzumab and adecatumumab, have been developed and tested in clinical trials for the treatment of colorectal, pancreatic, and other cancers. Another approach to targeting CEACAM5 is the use of vaccines. Researchers have developed vaccines that can stimulate the immune system to recognize and attack cancer cells that express CEACAM5. These vaccines are still in early stages of development and testing but show promise as a potential cancer therapy. Some researchers have investigated the use of small molecule inhibitors to block the function of CEACAM5. Small molecule inhibitors are drugs that can enter cells and disrupt specific protein-protein interactions or enzymatic functions.

Zeta CEACAM5 rabbit monoclonal antibody (clone ZR370) specifically recognizes human cell surface and cytoplasmic CEACAM5.

CEACAM5 Rabbit Monoclonal Antibody

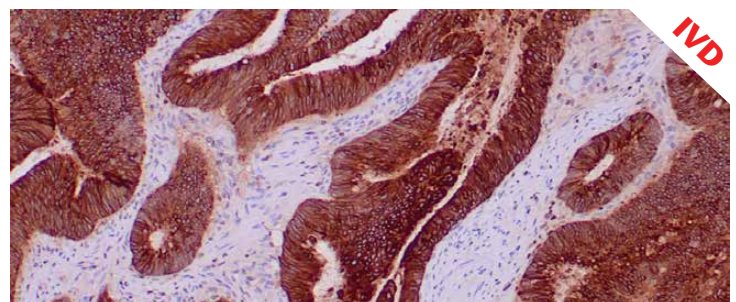
Anti-rabbit: Clone ZR370

Cat # Z2661

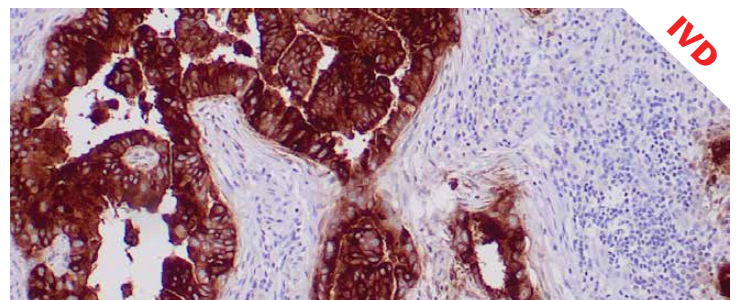
ZR370 recognizes carcinoembryonic antigen-related cell adhesion molecule 5 (CEACAM5, also known as CD66e) proteins (80-200kDa). CEACAM5 is synthesized during development in the fetal gut and is re-expressed in increased amounts in intestinal carcinomas and several other tumors. This MAbs does not react with nonspecific cross-reacting antigen (NCA) and with human polymorphonuclear leucocytes. It shows no reaction with a variety of normal tissues and is suitable for staining of formalin/paraffin tissues. CEACAM5 is not found in benign glands, stroma, or malignant prostatic cells. Antibody to CEACAM5 is useful in detecting early foci of gastric carcinoma and in distinguishing pulmonary adenocarcinomas (60-70% are CEACAM5+) from pleural mesotheliomas (rarely or weakly CEACAM5+). Anti-CEACAM5 positivity is seen in adenocarcinomas from the lung, colon, stomach, esophagus, pancreas, gallbladder, urachus, salivary gland, ovary, and endocervix. Studies have shown that CEACAM5 could be used as a therapeutic target for adenocarcinomas of lung, colon, and stomach origin.

References:

1. Azari F *et al.* JAMA Netw Open. 2023; **6**(1):e2252885.
2. Decary S *et al.* Clin Cancer Res. 2020 Dec 15; **26**(24):6589-6599.
3. Gisina A *et al.* Cancer Biomark. 2021; **32**(1):85-98.



*Human colon carcinoma stained with anti-CEACAM5, clone ZR370.
Note cytoplasmic and luminal surface staining of tumor cells.*



*Human pancreatic carcinoma stained with anti-CEACAM5, clone ZR370.
Note cytoplasmic and membrane staining.*