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ProductInformation

MONOCLONAL ANTI-HUMAN CARCINOEMBRYONIC ANTIGEN (CEA) CLONE C6G9 Mouse Ascites Fluid

Product No. **C 2331**

Product Description

Monoclonal Anti-Human Carcinoembryonic Antigen (CEA) (mouse IgG1 isotype) is derived from the C6G9 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from immunized BALB/c mice. CEA, isolated from a human colon adenocarcinoma cell line, was used as immunogen. The isotype is determined using Sigma ImmunoType™ Kit (Product Code ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Product Code ISO-2).

Monoclonal Anti-Human Carcinoembryonic Antigen (CEA) reacts specifically with human CEA (CD66e, 180 kDa) from several types of malignant tissues including colorectal, lung and breast tumors. It also stains medullary carcinomas of the thyroid. The product reacts strongly with the cell surface and cytoplasm of malignant glands in colorectal adenocarcinomas. A weak reactivity is seen with normal colon mucosa and occasionally with bile canalicular and pancreatic acinar cells, but not with other tested normal tissues including term placenta. There is no cross reactivity with non-specific cross-reacting antigen (NCA) present in granulocytes by immunoblotting, flow cytometry or immunohistochemical techniques. The antibody recognizes an epitope that is resistant to 30 minute oxidation by 1% sodium periodate solution in routine formalin-fixed, paraffin-embedded tissue sections. Enzymatic predigestion with proteolytic enzymes enhances immunohistochemical staining of formalin-fixed, paraffin-embedded tissue sections with the antibody.

Monoclonal Anti-Carcinoembryonic Antigen (CEA) may be used for the localization of CEA using various immunochemical assays such as immunoblot, dot blot and immunohistochemistry.

Carcinoembryonic Antigen (CEA),[1,2] is a highly glycosylated cell surface glycoprotein (180 kDa), belonging to a group of substances known as the tumor-associated antigens (TAA). It is a member of a subgroup of the immunoglobulin supergene family. CEA was initially regarded as an oncofetal antigen specific for fetal gut and carcinomas of the gastrointestinal tract. Later studies have shown that CEA is present in patients with other types of carcinomas and in small amounts in certain normal adult tissues.[2] CEA in serum and tissue is an important parameter for the staging and follow-up of patients with some of the most common forms of cancer. It has been explored as a target antigen for immunoscintigraphic procedures, and for the distinction between primary and metastatic tumors. In the serum of healthy individuals, CEA reaches concentrations up to approximately 2.5 ng/ml. In cancer patients, concentrations more than 100 times higher have been recorded. Determination of serum CEA can therefore be of value in assessing a patient's condition as soon as cancer is suspected or a carcinoma diagnosed. Monitoring of CEA levels before and after cancer therapy facilitates early recognition of recurrences or detection of previously unremarked metastases. The value of CEA as a cancer marker, however, was contested when studies revealed the existence of several crossreacting antigens, which occur in normal and neoplastic tissues and share parts of their molecular structure with CEA. These antigens, sharing common epitopes with CEA, represent a complex family of glycoproteins called non-specific crossreacting antigens (NCAs).[3] They include normal crossreacting antigens 1 and 2 (NCA-1 and NCA-2), meconium antigen (MA), tumor-extracted-CEA related antigen (TEX), normal fecal antigens 1 and 2 (NFA-1 and NFA-2) and biliary glycoprotein (BGP).[4] Cell adhesion

properties were demonstrated for several members of the family including CEA, NCA and BGP.[5,6] Monoclonal antibody, reacting specifically with CEA is a useful tool for the identification and quantification of CEA, applying various immunochemical techniques.[4,7] It is useful, as part of immunohistochemical diagnostic panels, in identification of adenocarcinomas of different origin and for their differentiation from CEA-negative normal and neoplastic cells.

Reagents
The product is provided as ascites fluid with 0.1% sodium azide as a preservative.

Precautions
Due to the sodium azide content a material safety sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Product Profile
The minimum antibody working dilution of 1:8,000 was determined by indirect immunoperoxidase labeling of formalin-fixed, paraffin-embedded human colon carcinoma tissue.

In order to obtain best results, it is recommended that each user determine the optimal working dilution for individual applications by titration assay.

Storage
For continuous use, store at 2-8 °C for up to one month. For extended storage freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

References

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