Human CA125/MUC16
Alexa Fluor® 594-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 986811

Catalog Number: FAB56091T

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CA125/MUC-16 in direct ELISAs.
Source	Monoclonal Mouse IgG_1 Clone # 986811
Purification	Protein A or G purified from ascites
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human CA125/MUC-16 Met13360-Gln14347 (Met13472Thr & Gln13957Lys) Accession # NP_078966.2
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10^6 cells	HeLa human cervical cancer cell line

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** • 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

MUC16, also known as the CA125 antigen, is a mucin protein that may be found in type I transmembrane or secreted forms that are used monitor the progress of epithelial ovarian cancer therapy (1, 2). Expression of isoforms, proteolytic cleavage, and heavy N- and O- linked glycosylation produce forms of human MUC16 that can vary from 1148 to 22152 amino acids (aa) in length and 200 - 5000 kDa in size (1, 2). The 22152 aa form contains ser/thr-rich N-terminal tandem repeats, 4 LRR (Leu-rich repeat) domains, 56 SEA (sea urchin sperm protein, enterokinase and agrin) domains, a transmembrane domain, and a 31 aa cytoplasmic domain that includes a tyrosine phosphorylation site (1-4). SEA domains are ~120 aa in length, contain conserved residues including potential O-glycosylation sites and a pair of cysteines, and are often found in transmembrane mucins (3). The protein produced by R&D Systems represents aa 13360-14347 of the full sequence and includes the last 6 SEA domains. It shares 68% aa identity with canine MUC16. MUC16 is over-expressed by tumor cells including ovarian and mesothelial cancers (5). The transmembrane form can adhere to mesothelin in the peritoneum, facilitating metastasis of ovarian cancer to the peritoneal cavity (5-7). MUC16 also binds galectin-1 on immune cells and enhances its expression on tumor cells (8). MUC16-expressing tumors adhere to NK cells, down-regulate CD16 and suppress NK response, which may promote immune evasion (9, 10). MUC16 is also cyclically expressed in the endometrium and may contribute to immune privilege during pregnancy (10). In the eye, MUC16 and other mucins protect the cornea and keep it hydrated. It is altered on the conjunctival epithelium of patients with non-Sjogren dry eye syndrome (11).

References:

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