

AM32243PU-S**Monoclonal Antibody to TAG72 - Purified**

Alternate names:	CA 72-4, CA72-4, Tumor-Associated Glycoprotein 72, sialy-Tn
Quantity:	0.1 mg
Concentration:	0.2 mg/ml
Background:	Tumor-associated glycoprotein (TAG) 72 is a tumor marker, identified and characterized using two different monoclonal antibodies B72.3 and CC49. It is a mucin-like protein of high molecular weight (220-400 kd). The protein is expressed in several epithelial-derived cancers including 94% of colonic adenocarcinomas, 84% of invasive ductal carcinomas of the breast, 96% of non-small cell lung carcinomas, 100% of common epithelial ovarian carcinomas, as well as the majority of pancreatic, gastric, and esophageal cancers evaluated. The protein expression is also detected in fetal colon, stomach, and esophagus, thus defining TAG-72 as an oncofetal antigen.
Host / Isotype:	Mouse / IgG1
Recommended Isotype Controls:	SM10P (for use in human samples), SM20P (for use in rat samples), AM03095PU-N
Clone:	B72.3
Immunogen:	Membrane-enriched fraction of a Human breast carcinoma liver metastasis (B72.3)
Format:	State: Liquid purified IgG fraction from Bioreactor Concentrate Purification: Protein A/G Chromatography Buffer System: 10mM PBS Preservatives: 0.05% Sodium Azide Stabilizers: 0.05% BSA
Applications:	ELISA: Use Antibody without BSA for coating. Western Blot: 0.5-1 µg/ml. Flow Cytometry: 0.5-1 µg/10 ⁶ cells. Immunoprecipitation: 1-2 µg/500 µg protein lysate. Immunofluorescence: 1-2 µg/ml. Immunohistochemistry on Frozen and Formalin-Fixed Paraffin Sections: 0.5-1 µg/ml for 30 minutes at RT. No pretreatment is required for staining of formalin-fixed, paraffin-embedded tissues. Positive Control: Jurkat cells, Breast or lung carcinoma. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Molecular Weight:	220kDa
Specificity:	This antibody recognizes an oncofetal antigen of 220kDa, identified as a tumor-associated glycoprotein (TAG-72) with properties of a mucin. This Monoclonal antibody defines the mucin-carried sialylated-Tn epitope. TAG-72 is usually expressed by adenocarcinomas, but is negative in mesotheliomas. Studies have reported that this antibody has 80% sensitivity and 93% specificity for pulmonary adenocarcinoma. Therefore, TAG-72 is a useful marker to distinguish

between mesothelioma and adenocarcinoma. However, false positive reactions can occur so results must be interpreted with the utmost caution. This antibody may be useful in the differentiation of non-small cell carcinomas from small cell carcinomas of the lung. The combined use of anti-TAG-72 and anti-GCDFP-15 is valuable in the diagnosis of apocrine carcinoma.

Cellular Localization: Cell surface and cytoplasmic.

Species Reactivity:

Tested: Human, Cow, Hamster, Dog, and Rat.

Storage:

Store undiluted at 2-8°C.

DO NOT FREEZE!

Shelf life: one year from despatch.

General Readings:

1. Colcher D, Minelli MF, Roselli M, Muraro R, Simpson-Milenic D, Schlom J. Radioimmunolocalization of human carcinoma xenografts with B72.3 second generation monoclonal antibodies. *Cancer Res.* 1988 Aug 15;48(16):4597-603. PubMed PMID: 3396011.
2. Sheer DG, Schlom J, Cooper HL. Purification and composition of the human tumor-associated glycoprotein (TAG-72) defined by monoclonal antibodies CC49 and B72.3. *Cancer Res.* 1988 Dec 1;48(23):6811-8. PubMed PMID: 3180090.
3. Hanisch FG, Uhlenbruck G, Egge H, Peter-Katalinić J. A B72.3 second-generation monoclonal antibody (CC49) defines the mucin-carried carbohydrate epitope Gal beta(1-3) [NeuAc alpha(2-6)]GalNAc. *Biol Chem Hoppe Seyler.* 1989 Jan;370(1):21-6. PubMed PMID: 2469434.
4. Katari RS, Fernsten PD, Schlom J. Characterization of the shed form of the human tumor-associated glycoprotein (TAG-72) from serous effusions of patients with different types of carcinomas. *Cancer Res.* 1990 Aug 15;50(16):4885-90. PubMed PMID: 2379152.
5. Filella X, Friese S, Roth HJ, Nussbaum S, Wehnl B. Technical performance of the Elecsys CA 72-4 test--development and field study. *Anticancer Res.* 2000 Nov-Dec;20(6D):5229-32. PubMed PMID: 11326700.
6. Negishi Y, Iwabuchi H, Sakunaga H, Sakamoto M, Okabe K, Sato H, et al. Serum and tissue measurements of CA72-4 in ovarian cancer patients. *Gynecol Oncol.* 1993 Feb;48(2):148-54. PubMed PMID: 8381375.
7. Lottich SC, Johnston WW, Szpak CA, DeLong ER, Thor A, Schlom J. Tumor-associated antigen TAG-72: correlation of expression in primary and metastatic breast carcinoma lesions. *Breast Cancer Res Treat.* 1985;6(1):49-56. PubMed PMID: 2996665.
8. Thor A, Ohuchi N, Szpak CA, Johnston WW, Schlom J. Distribution of oncofetal antigen tumor-associated glycoprotein-72 defined by monoclonal antibody B72.3. *Cancer Res.* 1986 Jun;46(6):3118-24. PubMed PMID: 3516392.
9. Kline TS, Lundy J, Lozowski M. Monoclonal antibody B72.3. An adjunct for evaluation of suspicious aspiration biopsy cytology from the breast. *Cancer.* 1989 Jun 1;63(11):2253-6. PubMed PMID: 2655865.

Pictures:

Formalin-Fixed, Paraffin-Embedded colon cancer stained with TAG72 Antibody Cat.-No AM32243PU (Clone B72.3) using HRPO-DAB. Note cytoplasmic and cell surface staining.

