SANTA CRUZ BIOTECHNOLOGY, INC.

# TAG-72 (B72.3): sc-20042

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

Tumor-associated glycoprotein 72 (TAG-72) is a high molecular weight glycoprotein that localizes to the cytoplasm and cell membrane of malignant cells. TAG-72 is expressed by 80% of colorectal carcinomas but is rarely expressed in normal epithelium and benign diseases. In addition, TAG-72 is highly expressed by low-grade mucoepidermoid carcinomas but is absent in pure squamous cell mucoepidermoid carcinomas. With the exception of secretory endometrium, TAG-72 expression is weak or nondetectable in normal adult tissues. TAG-72 is expressed by several gynecologic malignancies including common epithelial ovarian carcinomas and endometrial carcinomas. In human prostatic adenocarcinomas, TAG-72 expression negatively correlates with the Gleason grade of differentiation. TAG-72 is expressed by the majority of gastric, esophageal, pancreatic and non-small cell lung carcinomas. Finally, TAG-72 is useful for purifying primary ovarian cancer cells from patient ascites.

## SOURCE

TAG-72 (B72.3) is a mouse monoclonal antibody raised against a membrane-enriched fraction of a human breast carcinoma liver metastasis.

## PRODUCT

Each vial contains 200 µg $IgG_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TAG-72 (B72.3) is available conjugated to agarose (sc-20042 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-20042 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-20042 PE), fluorescein (sc-20042 FITC), Alexa Fluor® 488 (sc-20042 AF488), Alexa Fluor® 546 (sc-20042 AF546), Alexa Fluor® 594 (sc-20042 AF594) or Alexa Fluor® 647 (sc-20042 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-20042 AF680) or Alexa Fluor® 790 (sc-20042 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

## STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

## APPLICATIONS

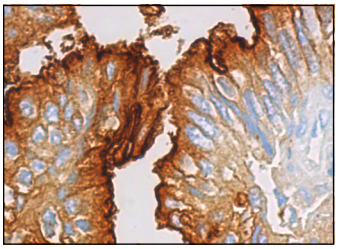
TAG-72 (B72.3) is recommended for detection of TAG-72 of broad species origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x $10^6$ cells).

Molecular Weight of TAG-72: 220 kDa.

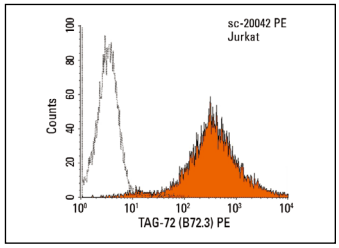
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



TAG-72 (B72.3): sc-20042. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon adenocarcinoma tissue showing cytoplasmic and membrane staining of tumor cells.




TAG-72 (B72.3) PE: sc-20042 PE. FCM analysis of Jurkat cells. Black line histogram represents the isotype control, normal mouse $IgG_1$-PE: sc-2866.

## SELECT PRODUCT CITATIONS


1. Pasternack, J.B., et al. 2014. The advantage of antibody cocktails for targeted α therapy depends on specific activity. J. Nucl. Med. 55: 2012-2019.
2. Kudelka, M.R., et al. 2016. Cosmc is an X-linked inflammatory bowel disease risk gene that spatially regulates gut microbiota and contributes to sex-specific risk. Proc. Natl. Acad. Sci. USA 113: 14787-14792.
3. McNeil, N.E., et al. 2017. Novel mouse model recapitulates genome and transcriptome alterations in human colorectal carcinomas. Genes Chromosomes Cancer 56: 199-213.
4. Ogawa, T., et al. 2017. ST6GALNAC1 plays important roles in enhancing cancer stem phenotypes of colorectal cancer via the Akt pathway. Oncotarget 8: 112550-112564.
5. Albertó, M., et al. 2019. Expression of bladder cancer-associated glycans in murine tumor cell lines. Oncol. Lett. 17: 3141-3150.
6. Biel, T.G., et al. 2022. An etanercept O-glycovariant with enhanced potency. Mol. Ther. Methods Clin. Dev. 25: 124-135.
7. Dombek, G.E., et al. 2022. Immunohistochemical analysis of Tn antigen expression in colorectal adenocarcinoma and precursor lesions. BMC Cancer 22: 1281.


## RESEARCH USE

For research use only, not for use in diagnostic procedures.