

5T4 Oncofetal Trophoblast glycoprotein. Rabbit Antigen Immunoaffinity Purified Polyclonal

Trophoblast glycoprotein, TPBG, 5T4 oncofetal antigen, 5T4 oncotrophoblast glycoprotein, 5T4 oncofetal trophoblast glycoprotein, M6P1

BACKGROUND

5T4 is a N-glycosylated transmembrane 72 kDa (420 AA) glycoprotein containing seven leucine-rich repeat regions. 5T4 is often referred to as an oncofetal antigen due to its expression in fetal trophoblast where it was first discovered or trophoblast glycoprotein (TPBG). 5T4 oncofetal antigen is defined by a monoclonal antibody originally raised against human placental trophoblast and which recognizes a 72 kD glycoprotein expressed in a variety of different carcinomas but detected only at very low levels in normal epithelia. Patterns of expression of 5T4 oncofetal antigen in colorectal carcinomas indicate a significant association with tumor metastasis. By IHC, 71% of the carcinomas demonstrate positive 5T4 immunoreactivity in adenocarcinoma cells and/or associated stromal tissue. 5T4 is found in tumors including the colorectal, ovarian, and gastric. Its expression is used as a prognostic aid in these cases. 5T4 is widespread in malignant tumors throughout the various stages of their development.

In assessing the 5T4 phenotype it has been determined that there is a significant correlation between 5T4 expression and advanced stage of disease (FIGO stages III and IV) ($P < 0.001$) and with poorly differentiated tumors ($P = 0.036$) compared to well or moderately differentiated tumors. Patients with tumors expressing 5T4 were are likely to respond well to adjuvant therapy and have a significantly worse outlook in terms of survival and disease-free interval.

IMMUNOGEN

Synthetic peptide derived from human 5T4 oncofetal antigen protein

POSITIVE CONTROL/TISSUE EXPRESSION

Ovarian Cancer, gastric cancer, colorectal cancer.

COMMENTS

This antibody can be used for immunohistochemistry on formalin/paraffin sections (5-10 $\mu\text{g/ml}$). Optimal concentration should be evaluated by serial dilutions.

ORDERING INFORMATION

CATALOG NUMBER

X2738P

SIZE

100 μg

FORM

Affinity Purified

HOST/CLONE

Rabbit

FORMULATION

Provided as solution in phosphate buffered saline with 0.08% sodium azide

CONCENTRATION

See vial for concentration

ISOTYPE

Ig

APPLICATIONS

Immunohistochemistry, Western Blot, ELISA

SPECIES REACTIVITY

Human

ACCESSION NUMBER

Q13641, Human

PURIFICATION

Antigen Immunoaffinity Purification

SHIP CONDITIONS

Ship at ambient temperature, freeze upon arrival

STORAGE CUSTOMER

Product should be stored at -20°C. Aliquot to avoid freeze/thaw cycles

STABILITY

Products are stable for one year from purchase when stored properly

REFERENCES

1. Yoshihara, S., et al. '5T4 glycoprotein regulates the sensory input-dependent development of a specific subtype of newborn interneurons in the mouse olfactory bulb.' J. Neurosci. 2012, 32, 2217-2226.
2. Southgate, T.D., et al. 'CXCR4 mediated chemotaxis is regulated by 5T4 oncofetal glycoprotein in mouse embryonic cells.' PLoS One 2010, 5, e9982.
3. Shingler, W.H., et al. 'Identification and functional validation of MHC class I epitopes in the tumor-associated antigen 5T4.' Int. Immunol. 2008, 20, 1057-1066.

PRODUCT SPECIFIC REFERENCES