

RUO DATA SHEET

5T4

Concentrated Rabbit Monoclonal Antibody

Intended Use:

For Research Use Only (RUO)

Epitomics' Rabbit Monoclonal Anti-Human 5T4, Clone EP347, is intended for use to qualitatively identify 5T4 by light microscopy in sections of formalin-fixed, paraffin-embedded tissue using immunohistochemical detection methodology.

Catalog number	Description	Dilution
AC-0299RUO	0.1 ml, concentrated	1:100-1:200
AC-0299RUOB	0.5 ml, concentrated	1:100-1:200
AC-0299RUOC	1 ml, concentrated	1:100-1:200
AC-0299RUOBULK	2 ml or more, concentrated	1:100-1:200

Immunogen: A synthetic peptide corresponding to residues of human 5T4 protein

Source: Rabbit Monoclonal Antibody

Clone ID: EP347

Isotype: Rabbit IgG

Application: Immunohistochemistry for formalin-fixed paraffin-embedded tissue

Summary and Explanation:

5T4 oncofetal antigen, also known as trophoblast glycoprotein (TPBG) is a 72-kDa membrane glycoprotein. While its specific function is unknown, 5T4 expression has been shown to influence adhesion, cytoskeletal organization and cell motility. Placental syncytiotrophoblasts highly express the 5T4 antigen.

In contrast, 5T4 expression has been reported in approximately 85% of colorectal and 81% of gastric carcinomas; expression in carcinomas of the bronchus, breast, cervix, endometrium, pancreas and ovary have also been reported. Presence of 5T4 in malignant cells is associated with advanced disease and poorer overall survival. Recent studies have shown that the 5T4 antigen is expressed on proliferating tumor-initiating cells (cancer stem cells) and associated with the epithelial-mesenchymal transition.

Due to its restricted expression and association with worse clinical outcome, 5T4 is a viable therapeutic target. Several vaccines, antibody-targeted immunotherapies and antibody-drug conjugates against 5T4 are currently under development.

Reagent Provided:

Antibody to 5T4 is affinity purified and diluted in 10 mM phosphate buffered saline (PBS), pH 7.2 containing 1% bovine serum albumin (BSA) and 0.09% sodium azide (NaN₃).

Storage and Stability:

Store at 2-8 °C. Do not use after expiration date provided on the vial. End user must validate any storage conditions other than those specified.

Procedures Recommended:

- 1. Pretreatment:** Epitope retrieval using Tris/EDTA buffer (catalog #: SP-0004) with a pressure cooker.
- 2. Endogenous peroxidase block:** Block for 10 minutes at room temperature using peroxidase solution (catalog #: SP-0002).
- 3. Protein block:** Block for 10 minutes at room temperature using blocking solution (catalog #: SP-0003).
- 4. Primary antibody:** Incubate for 30 minutes.
- 5. Detection:** Follow instructions from the selected detection system (EpiPrecision™, a Biotin Streptavidin-HRP Detection, catalog #: DK-0001, 0003, or EpiVision™, a Rabbit Polymer Detection, catalog # DK-0002, 0004).

The antibody dilution and protocol may vary depending on the specimen preparation and specific application. Optimal conditions should be determined by the individual laboratory.

Performance Characteristics:

This antibody gives membrane staining in positive cells. The recommended positive controls are placenta for normal tissue and colonic or gastric carcinoma for abnormal tissue.

Limitations:

Immunohistochemistry is a complex process. Variation in tissue selection, tissue processing, antigen retrieval, peroxidase activity, detection systems and improper counterstaining may cause variation in results.

References:

1. Boghaert ER, et al.: *Int J Oncol.* 2008 Jan;32(1):221-34.
2. Elkord E, et al.: *Expert Rev Anticancer Ther.* 2009, 9(12):1705-9.
3. Harrop R, et al.: *Clin Cancer Res.* 2006, 12(11 Pt 1):3416-24.
4. Hole N, et al.: *Br J Cancer.* 1988, 57(3):239-46.
5. Sapra P, et al.: *Mol Cancer Ther.* 2013, 12(1):38-47.
6. Starzynska T, et al.: *Br J Cancer.* 1992, 66(5):867-9.
7. Starzynska T, et al.: *Br J Cancer.* 1994, 69(5):899-902.

101682 Rev. 00

