

**DESCRIPTION**

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human 5T4 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 20% cross-reactivity with recombinant mouse 5T4 is observed.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human 5T4 Ser31-Ser355 Accession # Q13641
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

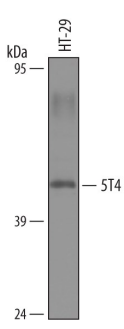
**APPLICATIONS**

**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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	1 µg/mL	See Below
<b>Immunohistochemistry</b>	5-15 µg/mL	See Below
<b>Simple Western</b>	50 µg/mL	Human placenta

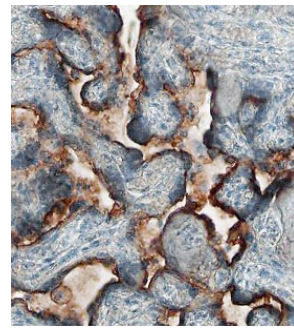
**DATA**

**Western Blot**



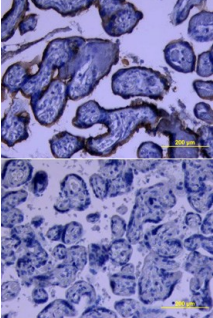
**Detection of Human 5T4 by Western Blot.** Western blot shows lysates of HT-29 human colon adenocarcinoma cell line. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Human 5T4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4975) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for 5T4 at approximately 50 kDa (as indicated). This experiment was conducted under reducing conditions and using [Immunoblot Buffer Group 8](#).

**Immunohistochemistry**



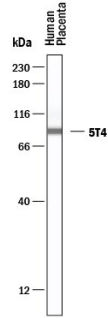
**5T4 in Human Placenta.** 5T4 was detected in immersion fixed paraffin-embedded sections of human placenta using 10 µg/mL Sheep Anti-Human 5T4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4975) overnight at 4 °C. Before incubation with the primary antibody tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained with the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

**Immunohistochemistry**




**5T4 in Human Placenta.** 5T4 was detected in immersion fixed paraffin-embedded sections of human placenta using Sheep Anti-Human 5T4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4975) at 10 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

**Simple Western**



**Detection of Human 5T4 by Simple Western™.** Simple Western lane view shows lysates of human placenta, loaded at 0.2 mg/mL. A specific band was detected for 5T4 at approximately 90 kDa (as indicated) using 50 µg/mL of Sheep Anti-Human 5T4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4975) followed by 1:50 dilution of HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



#### PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"><li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li><li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li><li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li></ul>

#### BACKGROUND

Human 5T4 (oncofetal antigen 5T4; also TPBG and trophoblast glycoprotein) is a 72 kDa glycoprotein member of the LRR family of proteins. It is expressed on trophoblasts, tumor cells, ovarian cuboidal epithelium, and embryonic stem cells and impacts cell adhesion and motility. The human 5T4 cDNA encodes a type I transmembrane protein precursor that is 420 amino acids (aa) in length. It contains a 324 aa extracellular region (aa 32-355) that shows one Ser-rich region followed by seven Leu-rich repeats (aa 90-355). Over aa 31-355, human 5T4 shares 81% and 85% aa identity with mouse and canine 5T4, respectively.