

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human TROP-2 in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 1% cross-reactivity with recombinant human (rh) MCAM, rhNCAM-L1, and rhBCAM is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human TROP-2 Thr88-Thr274 Accession # P09758
Formulation	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.

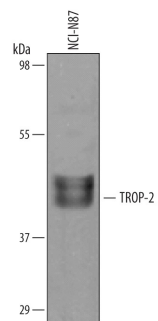
APPLICATIONS

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.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Flow Cytometry	2.5 µg/10 ⁶ cells	See Below
Immunohistochemistry	5-15 µg/mL	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

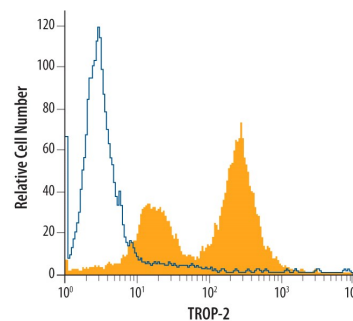
DATA

Western Blot



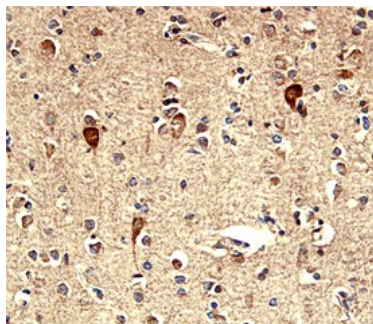
Detection of Human TROP-2 by Western Blot. Western blot shows lysates of NCI-N87 human gastric carcinoma cell line. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human TROP-2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF650) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for TROP-2 at approximately 45-50 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

Flow Cytometry



Detection of TROP-2 in PC-3 Human Cell Line by Flow Cytometry. PC-3 human prostate cancer cell line was stained with Goat Anti-Human TROP-2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF650, filled histogram) or control antibody (Catalog # AB-108-C, open histogram), followed by Phycoerythrin-conjugated Anti-Goat IgG Secondary Antibody (Catalog # F0107).

Immunohistochemistry



TROP-2 in Human Brain. TROP-2 was detected in immersion fixed paraffin-embedded sections of human brain (frontal cortex) using Goat Anti-Human TROP-2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF650) at 10 µg/mL 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 using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	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
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none">● 12 months from date of receipt, -20 to -70 °C as supplied.● 1 month, 2 to 8 °C under sterile conditions after reconstitution.● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Human TROP-2, also called tumor associated calcium signal transducer 2 (TACSTD2), GA733-1, gp50 and T16, is a type I cell surface glycoprotein that is highly expressed on human carcinomas. It was originally identified as an antigen present on human gastrointestinal tumors and is the second of two members of this family. The other family member is GA733-2, also called EpCAM, TROP-1, 17-1A, gp40 and KSA. The TROP-2 gene is unique in that it contains no introns. A study of these two genes suggested that TROP-2 was the result of a retroposition of the EpCAM gene. TROP-2 and EpCAM share approximately 49% amino acid identity and approximately 67% similarity. Human and mouse TROP-2 share 87% similarity. The human TROP-2 protein consists of a putative 26 amino acid (aa) signal sequence, a 248 aa extracellular domain, a 23 aa transmembrane region and a 26 aa cytoplasmic domain. TROP-2 is capable of transducing an intracellular calcium signal and may play a role in tumor growth. It also has adhesive functions.

References:

1. Linnenbach, A.J. *et al.* (1989) Proc. Natl. Acad. Sci. USA **86**:27.
2. Linnenbach, A.J. *et al.* (1993) Mol. Cell. Biol. **13**:1507.
3. Fornaro, M. *et al.* (1995) Int. J. Cancer **62**:610.
4. Ripani, E. *et al.* (1998) Int. J. Cancer **76**:671.
5. El Sewedy, T. *et al.* (1998) Int. J. Cancer **75**:324.