# Anti-TROP2 Antibody [A5E5]

## HA600069

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|---|---|
| **Product Type:** | Mouse monoclonal IgG, primary antibodies |
| **Species reactivity:** | Human |
| **Applications:** | WB, IF-Cell, IHC-P, FC |
| **Molecular Wt:** | 36 kDa |
| **Clone number:** | A5E5 |

**Description:** TROP-2, also known as tumor-associated calcium signal transducer 2 (TACSTD2), pancreatic carcinoma marker protein GA733-1, membrane component chromosome 1, surface marker 1 (M1S1) or epithelial glycoprotein-1 (EGP-1), is a cell surface glycoprotein receptor. It is a single pass type I membrane protein containing one thryoglobulin type-1 domain, an epidermal growth factor-like repeat, a phosphatidylinositol binding site and tyrosine phosphorylation sites near the C-terminus. TROP-2 plays a role in tranducing intracellular calcium signals. It is expressed in trophoblast cells, cornea and multistratified epithelia. It is also highly expressed in several types of tumors and is involved in regulating the growth of carcinoma cells. Mutations in the gene encoding TROP-2 can result in gelatinous drop-like corneal dystrophy (GDLD) also referred to as lattice corneal dystrophy type III, an autosomal recessive disorder that causes severe visual impairment.

**Immunogen:** Recombinant protein within human TROP2 aa 1-274 / 323 (Extracellular).

**Positive control:** MDA-MB-468 cell lysates, MCF-7, MDA-MB-468, human skin tissue.

**Subcellular location:** Membrane.

**Database links:** SwissProt: P09758 Human

**Recommended Dilutions:**

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| **WB** | 1:500-1:2,000 |
| **IF-Cell** | 1:50-1:100 |
| **IHC-P** | 1:100-1:500 |
| **FC** | 1:100-1:500 |

**Storage Buffer:** 1*TBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

**Storage Instruction:** Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

**Purity:** Protein G affinity purified.

## Images

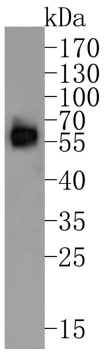


**Fig1:** Western blot analysis of TROP2 on MDA-MB-468 cell lysates. Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA600069, 1/500) was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1:20,000 dilution was used for 1 hour at room temperature.

Predicted band size: 36 kDa
Observed band size: 55 kDa

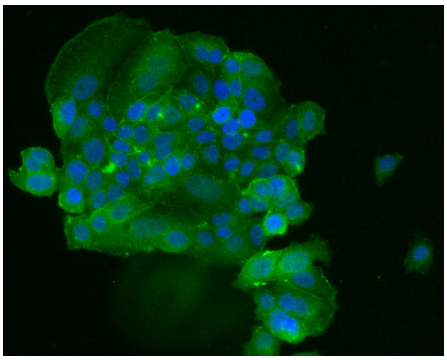

**Fig2:** ICC staining of TROP2 in MCF-7 cells (green). Formalin fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 10 minutes at room temperature and blocked with 10% negative goat serum for 15 minutes at room temperature. Cells were probed with the primary antibody (HA600069, 1/50) for 1 hour at room temperature, washed with PBS. Alexa Fluor®488 conjugate-Goat anti-Mouse IgG was used as the secondary antibody at 1/1,000 dilution. The nuclear counter stain is DAPI (blue).

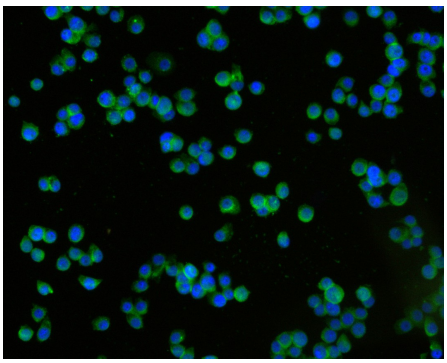

**Fig3:** ICC staining of in MDA-MB-468 cells (green). Formalin fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 10 minutes at room temperature and blocked with 10% negative goat serum for 15 minutes at room temperature. Cells were probed with the primary antibody (HA600069, 1/50) for 1 hour at room temperature, washed with PBS. Alexa Fluor®488 conjugate-Goat anti-Mouse IgG was used as the secondary antibody at 1/1,000 dilution. The nuclear counter stain is DAPI (blue).

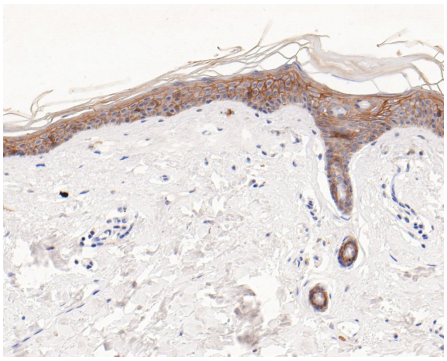

**Fig4:** Immunohistochemical analysis of paraffin-embedded human skin tissue using anti-TROP2 antibody. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 20 minutes. The tissues were blocked in 1% BSA for 30 minutes at room temperature, washed with dd$H_2O$ and PBS, and then probed with the primary antibody (HA600069, 1/400) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

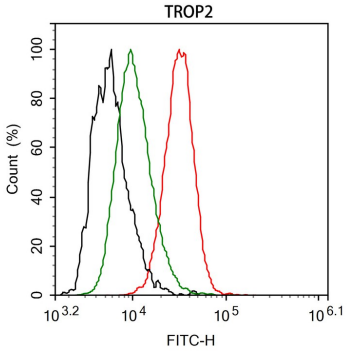


**Fig5:** Flow cytometric analysis of TROP2 was done on MDA-MB-468 cells. The cells were fixed, permeabilized and stained with the primary antibody (HA600069, 1ug/ml) (red) compared with Mouse IgG, monoclonal - Isotype Control ( green). After incubation of the primary antibody at room temperature for an hour, the cells were stained with a Alexa Fluor®488 conjugate-Goat anti-Mouse IgG Secondary antibody at 1/1000 dilution for 30 minutes.Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

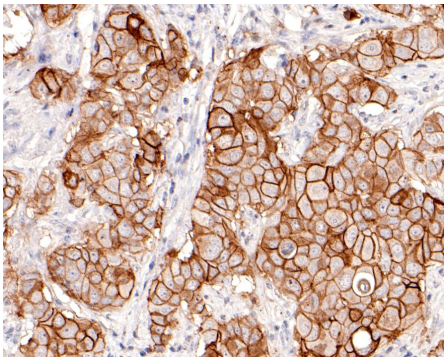

**Fig6:** Immunohistochemical analysis of paraffin-embedded human breast cancer tissue using anti-TROP2 antibody. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 20 minutes. The tissues were blocked in 1% BSA for 30 minutes at room temperature, washed with dd$H_2O$ and PBS, and then probed with the primary antibody (HA600069, 1/400) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

**Note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

## Background References

1. Lenárt S. et. al. Trop2: Jack of All Trades, Master of None. Cancers (Basel). 2020 Nov
2. Hsu EC. et. al. Trop2 is a driver of metastatic prostate cancer with neuroendocrine phenotype via PARP1. Proc Natl Acad Sci U S A. 2020 Jan