

# Trop-2/TACSTD2 (Extracellular region)

Mouse Monoclonal IgG1

Cat. # TM0051

Size 100  $\mu$ l

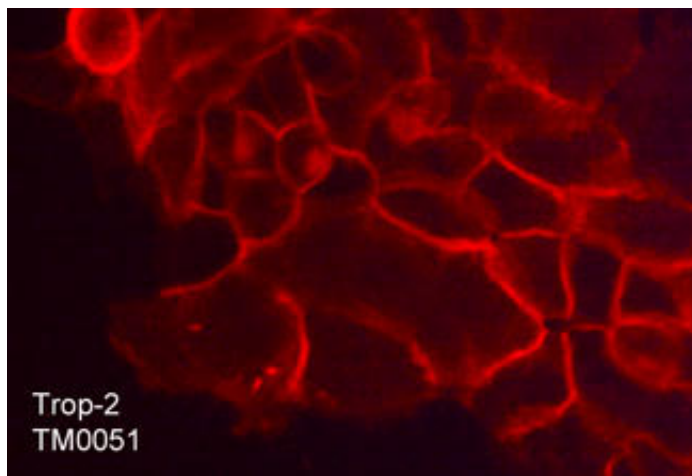
## Background

Trop-2 (TACSTD2) is a transmembrane glycoprotein found on invasive trophoblast cells and in several epithelial type cancer cells. Trop-2 has an extracellular domain with EGF thyroglobulin type-1 repeats, a transmembrane domain and a short cytoplasmic tail with a HIKE domain containing a PIP2 binding site. This glycoprotein functions in many signaling pathways including interaction of its extracellular domain with integrin  $\beta$ 1 to regulate FAK signaling, interaction of its transmembrane domain with claudin 1 and claudin 7 during tight junction formation, and regulation of intracellular calcium release by its PIP2 binding and activation of the ERK/MAPK pathway. These Trop-2 functions may be important during tumor proliferation, metastasis and invasion.

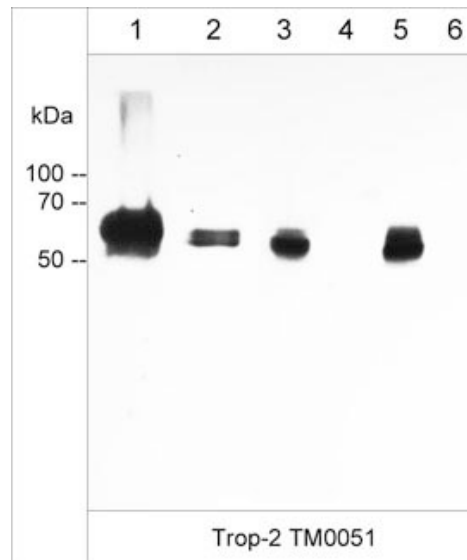
## Background References

Shvartsur A & Bonavida B (2015) *Genes Cancer* 6(3-4):84

McDougall, AR et al. (2015) *Dev Dyn.* 244:99



Immunocytochemical labeling of Trop-2 in paraformaldehyde fixed human A431 cells. The cells were labeled with mouse monoclonal anti-Trop-2 (clone M005). The antibody was detected using goat anti-mouse DyLight® 594.



Western blot analysis of human A431 (lanes 1 & 2), MDA-MB-231 (lanes 3 & 4), and MCF-7 (lanes 5 & 6) cell lysates under native (lanes 1, 3 & 5) and denatured (lanes 2, 4 & 6) conditions. The blots were probed with mouse monoclonal anti-Trop-2 (TM0051) at 1:1000 (lanes 1-6).

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## Immunogen

Clone M005 was generated from a proprietary antigen related to the extracellular region of human Trop-2 from the A431 epidermoid carcinoma cell line.

## Buffer and Storage

Mouse monoclonal antibody purified with protein G chromatography is supplied in 100  $\mu$ l phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at  $-20^{\circ}\text{C}$ . Stable for 1 year.

### Applications

WB	1:1000
IP	1:100
ICC	1:100
ELISA	1:2000

### Species Reactivity

Hu

End user should determine optimal dilution for their particular applications and experiments.

Western blot membranes were incubated with diluted antibody in 5% non-fat milk, Tris buffer, 0.04% Tween20 for 1 hour at room temperature.

Abbreviations: E = ELISA, ICC = immunocytochemistry, IHC = immunohistochemistry, IP = immunoprecipitation, MS = mass spectrometry, WB = western blot  
Hu = Human, Ms = Mouse, Rt = Rat, Ck = Chicken, F = Frog, B = Bovine

## Specificity

Clone M005 detects a 50-65 kDa\* band corresponding to the molecular mass of Trop-2 on SDS-PAGE immunoblots of native human A431, MDA-MB-231, and MCF-7 cell lysates. The antibody also detects denatured Trop-2, but with less affinity. Lower dilutions of the antibody should be used for denatured western blot. Clone M005 can be used for western blot, immunocytochemistry, ELISA, and immunoprecipitation, as well as for detecting live unfixed cells.

\*All molecular weights (MW) are confirmed by comparison to MW standards and to western blot mobilities of known proteins with similar MW.

"Native" western blot utilizes non-reducing sample buffer (no mercaptoethanol or SDS), normal SDS-PAGE gel electrophoresis, and no methanol in transfer buffers.

## Related Products

IK6270 Integrin  $\beta$ 4 Phospho-Regulation Antibody Sampler Kit

IM5821 Integrin  $\beta$ 1 (Extracellular region) Mouse Monoclonal

IM5831 Integrin  $\alpha$ 2 (Extracellular region) Mouse Monoclonal

FM1211 FAK (Tyr-397), phospho-specific Mouse Monoclonal

MK6050 MAP Kinase Activation Antibody Sampler Kit

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