

Trophinin (D-19): sc-67888

BACKGROUND

Trophinin, also known as TRO or MAGED3, is an apical cell adhesion molecule that interacts with and forms a complex with Bystin and Tastin, facilitating cell adhesion and embryo implantation. Trophinin is a membrane protein expressed in chorionic villi trophoblasts and in maternal endometrial epithelial cells in an implantation-dependent manner. It functions by mediating cell adhesion between trophoblastic and endometrial epithelial cells. The adhesion is achieved via homophilic Trophinin-Trophinin binding. Trophinin expression is induced by Choriogonadotropin β as well as IL-1 β , and higher expression levels of Trophinin promote cell adhesion. Since increased expression leads to greater rates of cell adhesion, induction of Trophinin expression may be a useful method for improving implantation rates. Trophinin is also found in macrophages and contains one MAGE (melanoma-associated antigen) domain.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 300132. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Wang, H.Y., et al. 2002. Expression of trophinin in the cycling endometrium and its association with infertility. *Di Yi Jun Yi Da Xue Xue Bao* 22: 539-541.
3. Kirkin, A.F., et al. 2002. Cancer/testis antigens: structural and immunobiological properties. *Cancer Invest.* 20: 222-236.
4. Nakano, S., et al. 2003. Trophinin is expressed in the porcine endometrium during the estrous cycle. *J. Reprod. Dev.* 49: 127-134.
5. Bertrand, M., et al. 2004. Comparative expression analysis of the MAGED genes during embryogenesis and brain development. *Dev. Dyn.* 230: 325-334.
6. Aoyama, J., et al. 2005. Apical cell adhesion molecule, trophinin, localizes to the nuclear envelope. *FEBS Lett.* 579: 6326-6332.

CHROMOSOMAL LOCATION

Genetic locus: Tro (mouse) mapping to X F3.

SOURCE

Trophinin (D-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Trophinin of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-67888 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Trophinin (D-19) is recommended for detection of Trophinin of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Trophinin siRNA (m): sc-63164; and as shRNA Plasmid control antibody for Trophinin shRNA Plasmid (m): sc-63164-SH.

Molecular Weight of human Trophinin: 69 kDa.

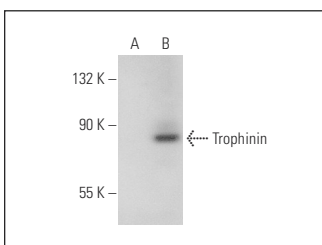
Molecular Weight of mouse Trophinin: 110 kDa.

Positive Controls: mouse placenta extract: sc-364247 or mouse uterus extract: sc-364254.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

DATA



Trophinin (D-19): sc-67888. Western blot analysis of Trophinin expression in non-transfected: sc-117752 (A) and human Trophinin transfected: sc-113881 (B) 293T whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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Try **Trophinin (A-6): sc-393834**, our highly recommended monoclonal alternative to Trophinin (D-19).