

Trophinin (clone 3-11): sc-80002

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. 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.
2. Kirkin, A.F., et al. 2002. Cancer/testis antigens: structural and immunobiological properties. *Cancer Invest.* 20: 222-236.

CHROMOSOMAL LOCATION

Genetic locus: TRO (human) mapping to Xp11.21; Tro (mouse) mapping to X F3.

SOURCE

Trophinin (clone 3-11) is a mouse monoclonal antibody raised against a synthetic peptide corresponding to amino acids 681-689 of Trophinin of human origin.

PRODUCT

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

APPLICATIONS

Trophinin (clone 3-11) is recommended for detection of Trophinin of mouse, rat and human 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Trophinin siRNA (h): sc-63163, Trophinin siRNA (m): sc-63164, Trophinin shRNA Plasmid (h): sc-63163-SH, Trophinin shRNA Plasmid (m): sc-63164-SH, Trophinin shRNA (h) Lentiviral Particles: sc-63163-V and Trophinin shRNA (m) Lentiviral Particles: sc-63164-V.

Molecular Weight of human Trophinin: 69 kDa.

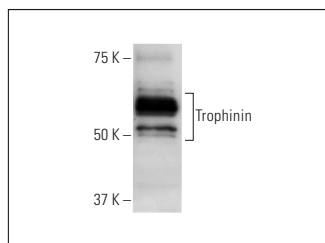
Molecular Weight of mouse Trophinin: 110 kDa.

Positive Controls: human trophoblastic embryonal carcinoma cell lysate.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohisto-mount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Trophinin (clone 3-11): sc-80002. Western blot analysis of Trophinin expression in human trophoblastic embryonal carcinoma cell lysate. Kindly provided by Dr. Michiko Fukuda, Burnham Institute for Medical Research.

SELECT PRODUCT CITATIONS

1. Karaöz, E., et al. 2011. Human dental pulp stem cells demonstrate better neural and epithelial stem cell properties than bone marrow-derived mesenchymal stem cells. *Histochem. Cell Biol.* 136: 455-473.
2. Dolanbay, E.G., et al. 2016. Expression of trophinin and dipeptidyl peptidase IV in endometrial co-culture in the presence of an embryo: a comparative immunocytochemical study. *Mol. Med. Rep.* 13: 3961-3968.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.