

# Trophinin (A-6): sc-393834

## 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  $\beta$  as well as IL-1 $\beta$ , 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.
3. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 300132. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Nakano, S., et al. 2003. Trophinin is expressed in the porcine endometrium during the estrous cycle. *J. Reprod. Dev.* 49: 127-134.

## CHROMOSOMAL LOCATION

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

## SOURCE

Trophinin (A-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1-24 at the N-terminus of Trophinin of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Trophinin (A-6) is available conjugated to agarose (sc-393834 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393834 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393834 PE), fluorescein (sc-393834 FITC), Alexa Fluor<sup>®</sup> 488 (sc-393834 AF488), Alexa Fluor<sup>®</sup> 546 (sc-393834 AF546), Alexa Fluor<sup>®</sup> 594 (sc-393834 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-393834 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-393834 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-393834 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393834 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor<sup>®</sup> is a trademark of Molecular Probes, Inc., Oregon, USA

## APPLICATIONS

Trophinin (A-6) is recommended for detection of Trophinin of mouse origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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, Trophinin shRNA Plasmid (m): sc-63164-SH and Trophinin shRNA (m) Lentiviral Particles: sc-63164-V.

Molecular Weight of human Trophinin: 69 kDa.

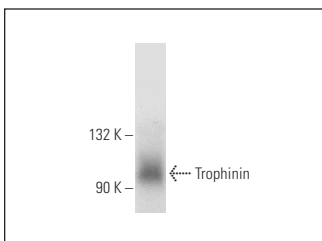
Molecular Weight of mouse Trophinin: 110 kDa.

Positive Controls: mouse brain extract: sc-2253.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 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 m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



Trophinin (A-6): sc-393834. Western blot analysis of Trophinin expression in mouse brain tissue extract.

## 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](http://www.scbt.com) for detailed protocols and support products.