

Tastin (F-12): sc-271716

BACKGROUND

Tastin (trophinin associated protein), also known as TROAP, is essential for centrosome integrity and proper bipolar organization of spindle assembly during mitosis. It is expressed at high levels in bone marrow, testis, and thymus, localizing to the cytoplasm and associating with microtubules, the mitotic spindle and centrosomes. Tastin expression peaks in the cell during the G₂/M phase and declines after the cell divides. Cells overexpressing Tastin form monopolar spindles, while cells depleted of Tastin form multipolar spindles. Tastin binds directly to the dynein light chain (Dynein LC or Tctex-1) and γ Tubulin, further supporting its role in spindle assembly and cell proliferation. In addition, Tastin can interact with and form a complex with bystin and trophinin, facilitating cell adhesion and, in particular, embryo implantation.

REFERENCES

1. Fukuda, M.N., et al. 1995. Trophinin and Tastin, a novel cell adhesion molecule complex with potential involvement in embryo implantation. *Genes Dev.* 9: 1199-1210.
2. Fukuda, M.N. 1996. Molecular basis of embryo implantation. *Keio J. Med.* 45: 37-43.
3. Fukuda, M.N., et al. 1999. Trophinin, Tastin, and bystin: a complex mediating unique attachment between trophoblastic and endometrial epithelial cells at their respective apical cell membranes. *Semin. Reprod. Endocrinol.* 17: 229-234.
4. Suzuki, N., et al. 1999. Expression of trophinin, Tastin, and bystin by trophoblast and endometrial cells in human placenta. *Biol. Reprod.* 60: 621-627.
5. Nadano, D., et al. 2002. Human Tastin, a proline-rich cytoplasmic protein, associates with the microtubular cytoskeleton. *Biochem. J.* 364: 669-677.
6. Nakayama, J., et al. 2003. Implantation-dependent expression of trophinin by maternal fallopian tube epithelia during tubal pregnancies: possible role of human chorionic gonadotrophin on ectopic pregnancy. *Am. J. Pathol.* 163: 2211-2219.

CHROMOSOMAL LOCATION

Genetic locus: TROAP (human) mapping to 12q13.12.

SOURCE

Tastin (F-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 73-107 within an internal region of Tastin of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-271716 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Tastin (F-12) is recommended for detection of Tastin of human origin by Western Blotting (starting dilution 1:100, 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 Tastin siRNA (h): sc-63107, Tastin shRNA Plasmid (h): sc-63107-SH and Tastin shRNA (h) Lentiviral Particles: sc-63107-V.

Molecular Weight (predicted) of Tastin: 84 kDa.

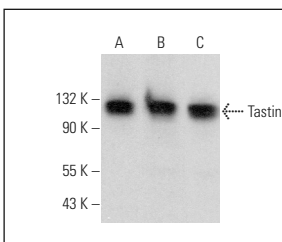
Molecular Weight (observed) of Tastin: 99-121 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, Tastin (h): 293T Lysate: sc-115239 or Caco-2 cell lysate: sc-2262.

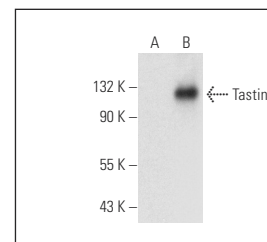
RECOMMENDED SUPPORT REAGENTS

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 A/G PLUS-Agarose: sc-2003 (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.

DATA



Tastin (F-12): sc-271716. Western blot analysis of Tastin expression in MCF7 (A), Caco-2 (B) and TF-1 (C) whole cell lysates.



Tastin (F-12): sc-271716. Western blot analysis of Tastin expression in non-transfected: sc-117752 (A) and human Tastin transfected: sc-115239 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Li, L., et al. 2021. TROAP switches DYRK1 activity to drive hepatocellular carcinoma progression. *Cell Death Dis.* 12: 125.

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.