

T-Plastin (A-3): sc-166208

BACKGROUND

Plastins (fimbrins) are members of a family of Actin-binding proteins that exhibit a tissue-specific expression pattern. Both L- and T-Plastin have been shown to be involved in cytoskeletal reorganization. L-Plastin, which is specifically expressed in hematopoietic cell lineages, has been proposed to be involved in the control of cell adhesion and motility. It is frequently expressed in cell lines derived from mammary solid tumors and is implicated in cancer invasion and metastasis. L-Plastin is also expressed in the majority of human cancer cell lines that are derived from various types of solid tumors. Additionally, L-Plastin is involved in regulating of leukocyte adhesion, and the phosphorylation of L-Plastin is implicated in modulating integrin regulation signaling pathways. T-Plastin is unique in that it is expressed in many types of tissues and notably absent in leukocytes.

REFERENCES

1. Lin, C.S., et al. 1998. Analysis and mapping of Plastin phosphorylation. *DNA Cell Biol.* 17: 1041-1046.
2. Jones, S.L., et al. 1998. A role for the Actin-bundling protein L-Plastin in the regulation of leukocyte integrin function. *Proc. Natl. Acad. Sci. USA* 95: 9331-9336.

CHROMOSOMAL LOCATION

Genetic locus: PLS3 (human) mapping to Xq23; Pls3 (mouse) mapping to X A7.3.

SOURCE

T-Plastin (A-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 482-516 near the C-terminus of T-Plastin of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

T-Plastin (A-3) is available conjugated to agarose (sc-166208 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166208 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166208 PE), fluorescein (sc-166208 FITC), Alexa Fluor® 488 (sc-166208 AF488), Alexa Fluor® 546 (sc-166208 AF546), Alexa Fluor® 594 (sc-166208 AF594) or Alexa Fluor® 647 (sc-166208 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166208 AF680) or Alexa Fluor® 790 (sc-166208 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166208 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

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

APPLICATIONS

T-Plastin (A-3) is recommended for detection of T-Plastin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

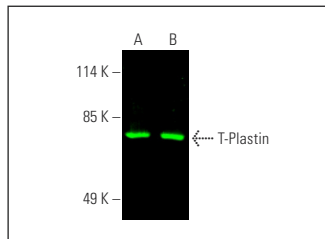
T-Plastin (A-3) is also recommended for detection of T-Plastin in additional species, including equine, porcine and avian.

Suitable for use as control antibody for T-Plastin siRNA (h): sc-43215, T-Plastin siRNA (m): sc-43216, T-Plastin shRNA Plasmid (h): sc-43215-SH, T-Plastin shRNA Plasmid (m): sc-43216-SH, T-Plastin shRNA (h) Lentiviral Particles: sc-43215-V and T-Plastin shRNA (m) Lentiviral Particles: sc-43216-V.

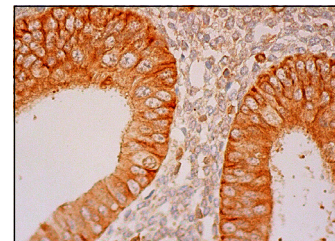
Molecular Weight of T-Plastin: 70 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, SJRH30 whole cell lysate: sc-2287 or SCC-4 whole cell lysate: sc-364363.

DATA



T-Plastin (A-3): sc-166208. Near-infrared western blot analysis of T-Plastin expression in HeLa (A) and SCC-4 (B) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.



T-Plastin (A-3): sc-166208. Immunoperoxidase staining of formalin fixed, paraffin-embedded human premenopausal uterus tissue showing cytoplasmic staining of glandular cells and cells in endometrial stroma.

SELECT PRODUCT CITATIONS

1. Marzano, V., et al. 2012. Proteomic profiling of ATM kinase proficient and deficient cell lines upon blockage of proteasome activity. *J. Proteomics* 75: 4632-4646.
2. Li, N., et al. 2015. Actin-bundling protein plastin 3 is a regulator of ectoplasmic specialization dynamics during spermatogenesis in the rat testis. *FASEB J.* 29: 3788-3805.
3. Li, N., et al. 2016. Overexpression of plastin 3 in sertoli cells disrupts Actin microfilament bundle homeostasis and perturbs the tight junction barrier. *Spermatogenesis* 6: e1206353.
4. Kuriyama, K., et al. 2021. Plasma plastin-3: a tumor marker in patients with non-small-cell lung cancer treated with nivolumab. *Oncol. Lett.* 21: 11.

RESEARCH USE

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