SANTA CRUZ BIOTECHNOLOGY, INC.

T-Plastin (A-8): sc-166223

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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., Lau, A. and Lue, T.F. 1998. Analysis and mapping of Plastin phosphorylation. DNA Cell Biol. 17: 1041-1046.
2. Jones, S.L., Wang, J., Turck, C.W. and Brown, E.J. 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.
3. Lin, C.S., Lau, A., Huynh, T. and Lue, T.F. 1999. Differential regulation of human T-Plastin gene in leukocytes and non-leukocytes: identification of the promoter, enhancer, and CpG island. DNA Cell Biol. 18: 27-37.
4. Lin, C.S., Lau, A., Yeh, C.C., Chang, C.H. and Lue, T.F. 2000. Upregulation of L-Plastin gene by testosterone in breast and prostate cancer cells: identification of three cooperative androgen receptor-binding sequences. DNA Cell Biol. 19: 1-7.
5. Lapillonne, A., Coue, O., Friederich, E., Nicolas, A., Del Maestro, L., Louvard, D., Robine, S. and Sastre-Garau, X. 2000. Expression patterns of L-Plastin isoform in normal and carcinomatous breast tissues. Anticancer Res. 20: 3177-3182.

CHROMOSOMAL LOCATION

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

SOURCE

T-Plastin (A-8) 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.

Blocking peptide available for competition studies, sc-166223 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

T-Plastin (A-8) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

T-Plastin (A-8) 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.

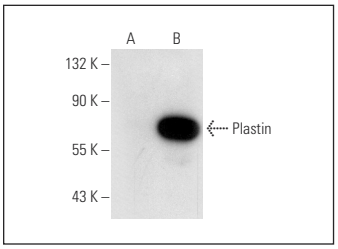
Molecular Weight of T-Plastin: 70 kDa.

Positive Controls: Plastin (h2): 293T Lysate: sc-116654, SCC-4 whole cell lysate: sc-364363 or SJRH30 cell lysate: sc-2287.

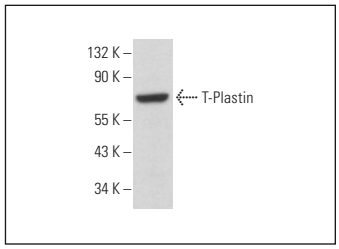
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



T-Plastin (A-8): sc-166223. Western blot analysis of Plastin expression in non-transfected: sc-117752 (**A**) and human Plastin transfected: sc-116654 (**B**) 293T whole cell lysates.



T-Plastin (A-8): sc-166223. Western blot analysis of T-Plastin expression in SCC-4 whole cell lysate.

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.