

Plastin (F-2): sc-271223

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.
3. Lin, C.S., et al. 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., et al. 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., et al. 2000. Expression patterns of L-Plastin isoform in normal and carcinomatous breast tissues. *Anticancer Res.* 20: 3177-3182.

SOURCE

Plastin (F-2) is a mouse monoclonal antibody raised against amino acids 328-627 mapping at the C-terminus of T-Plastin of human origin.

PRODUCT

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

Plastin (F-2) is available conjugated to agarose (sc-271223 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271223 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271223 PE), fluorescein (sc-271223 FITC), Alexa Fluor[®] 488 (sc-271223 AF488), Alexa Fluor[®] 546 (sc-271223 AF546), Alexa Fluor[®] 594 (sc-271223 AF594) or Alexa Fluor[®] 647 (sc-271223 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-271223 AF680) or Alexa Fluor[®] 790 (sc-271223 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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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

Plastin (F-2) is recommended for detection of T-Plastin, L-Plastin and I-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).

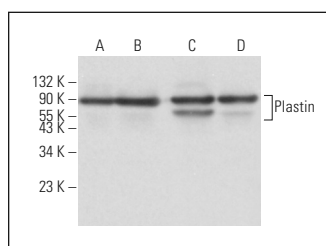
Molecular Weight of Plastin: 71 kDa.

Positive Controls: Sol8 cell lysate: sc-2249, A-10 cell lysate: sc-3806 or L6 whole cell lysate: sc-364196.

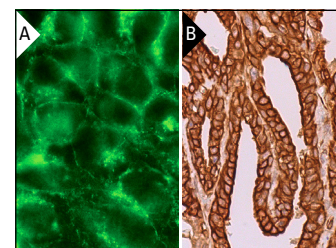
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Plastin (F-2): sc-271223. Western blot analysis of Plastin expression in Sol8 (A), C2C12 (B), A-10 (C) and L6 (D) whole cell lysates.



Plastin (F-2): sc-271223. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoskeletal localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human seminal vesicle tissue showing cytoplasmic and membrane staining of glandular cells (B).

SELECT PRODUCT CITATIONS

1. Pan, L., et al. 2020. S-nitrosylation of plastin-3 exacerbates thoracic aortic dissection formation via endothelial barrier dysfunction. *Arterioscler. Thromb. Vasc. Biol.* 40: 175-188.
2. Liu, Y., et al. 2021. Discovery of key genes as novel biomarkers specifically associated with HPV-negative cervical cancer. *Mol. Ther. Methods Clin. Dev.* 21: 492-506.

RESEARCH USE

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