

T β -10 (D-6): sc-514309

BACKGROUND

Thymosin β -10 (T β -10) is a member of the highly conserved β -thymosin family. It is a monomeric G-Actin sequestering protein of the cytoplasm that regulates Actin dynamics. T β -10 consists of 43 amino acids and often forms α -helical structures. T β -10 has been shown to act as an Actin-mediated tumor suppressor. Overexpression of this protein inhibits endothelial cell proliferation, migration, invasion and tube formation. In human ovarian cancer cells, T β -10 also increases apoptosis frequency. T β -10 directly interacts with Ras, resulting in inhibition of the Ras downstream signaling pathways which, in turn, exhibits a negative effect on angiogenesis and tumor growth. More specifically, this inhibitive effect might be mediated by the downregulation of vascular endothelial growth factor (VEGF), VEGF receptor-1 (VEGFR-1) and Integrin α V, which suggests a role for T β -10 in anticancer therapy.

CHROMOSOMAL LOCATION

Genetic locus: TMSB10 (human) mapping to 2p11.2; Tmsb10 (mouse) mapping to 6 C1.

SOURCE

T β -10 (D-6) is a mouse monoclonal antibody raised against amino acids 1-44 representing full length T β -10 of human origin.

PRODUCT

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

T β -10 (D-6) is available conjugated to agarose (sc-514309 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514309 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514309 PE), fluorescein (sc-514309 FITC), Alexa Fluor[®] 488 (sc-514309 AF488), Alexa Fluor[®] 546 (sc-514309 AF546), Alexa Fluor[®] 594 (sc-514309 AF594) or Alexa Fluor[®] 647 (sc-514309 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-514309 AF680) or Alexa Fluor[®] 790 (sc-514309 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

T β -10 (D-6) is recommended for detection of T β -10 of mouse, rat and 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 T β -10 siRNA (h): sc-63094, T β -10 siRNA (m): sc-63095, T β -10 shRNA Plasmid (h): sc-63094-SH, T β -10 shRNA Plasmid (m): sc-63095-SH, T β -10 shRNA (h) Lentiviral Particles: sc-63094-V and T β -10 shRNA (m) Lentiviral Particles: sc-63095-V.

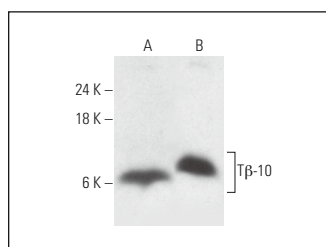
Molecular Weight of T β -10: 5 kDa.

Positive Controls: SK-BR-3 cell lysate: sc-2218 or HeLa whole cell lysate: sc-2200.

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



T β -10 (D-6): sc-514309. Western blot analysis of T β -10 expression in SK-BR-3 (A) and HeLa (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Zeng, J., et al. 2020. Thymosin β 10 promotes tumor-associated macrophages M2 conversion and proliferation via the PI3K/Akt pathway in lung adenocarcinoma. *Respir. Res.* 21: 328.
- Li, M., et al. 2024. Urolithin A promotes the degradation of TMSB10 to deformation F-Actin in non-small-cell lung cancer. *Phytomedicine* 135: 156109.
- Yang, J., et al. 2024. Can thymosin β 10 function both as a non-invasive biomarker and chemotherapeutic target in human colorectal cancer? *Transl. Oncol.* 46: 102026.

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 for detailed protocols and support products.