SANTA CRUZ BIOTECHNOLOGY, INC.

Vitronectin (h2): 293T Lysate: sc-170448

BACKGROUND

Fibronectin and Vitronectin are extracellular matrix glycoproteins that are present on most cell surfaces, in extracellular fluids, and in plasma. Both Fibronectin and Vitronectin have been shown to be involved in various functions including cell adhesion, cell motility and wound healing. Vitronectin contains an RGD (Arg-Gly-Asp acid) sequence that is present in many cell adhesion ligands. The RGD sequence has been shown to be essential for cell adhesion. Increased expression of Vitronectin, integrins and plasminogen activators has been observed in migrating cells during wound healing. Vitronectin has been shown to enhance smooth cell migration, and PAI-1 has been shown to bind to Vitronectin with high affinity, resulting in the blocking of smooth cell migration. Glycosaminoglycans, proteins involved in the anchoring of Vitronectin to the extracellular matrix, have been shown to stimulate the cleavage of Vitronectin by plasmin. This cleavage reduces the affinity of Vitronectin for PAI-1.

REFERENCES

1. Akiyama, S.K., et al. 1981. The structure of fibronectin and its role in cellular adhesion. J. Supramol. Struct. Cell. Biochem. 16: 345-348.
2. Ruoslahti, E., et al. 1982. Molecular and biological interactions in Fibronectin. J. Invest. Dermatol. 79: 65-68.
3. Chain, D., et al. 1991. Plasmin cleavage of vitronectin. Identification of the site and consequenct attenuation in binding plasminogen activator inhibitor-1. FEBS Lett. 285: 251-256.
4. Bauer, J.S., et al. 1992. Motility of Fibronectin receptor-deficient cells on Fibronectin and Vitronectin: collaborative interactions among integrins. J. Cell Biol. 116: 477-487.
5. Cherny, R.C., et al. 1993. Site-directed mutagenesis of the arginine-glycine-aspartic acid in Vitronectin abolishes cell adhesion. J. Biol. Chem. 268: 9725-9729.
6. Stefansson, S. and Lawrence, D.A. 1996. The serpin PAI-1 inhibits cell migration by blocking integrin $\alpha V\beta 3$ binding to Vitronectin. Nature 383: 441-443.
7. Rosenblatt, S., et al. 1997. Differential modulation of cell adhesion by interaction between adhesive and counter-adhesive proteins: characterization of the binding of Vitronectin to osteonectin (BM40, SPARC). Biochem. J. 324: 311-319.

CHROMOSOMAL LOCATION

Genetic locus: VTN (human) mapping to 17q11.2.

PRODUCT

Vitronectin (h2): 293T Lysate represents a lysate of human Vitronectin transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

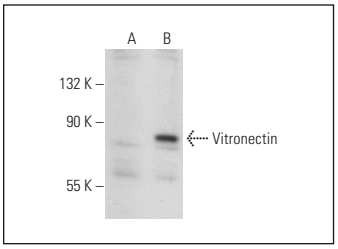
APPLICATIONS

Vitronectin (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive Vitronectin antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Vitronectin 75 (GMA-900): sc-65972 is recommended as a positive control antibody for Western Blot analysis of enhanced human Vitronectin expression in Vitronectin transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

DATA



Vitronectin 75 (GMA-900): sc-65972. Western blot analysis of Vitronectin expression in non-transfected: sc-117752 (**A**) and human Vitronectin transfected: sc-170448 (**B**) 293T whole cell lysates.

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.