SANTA CRUZ BIOTECHNOLOGY, INC.

Vitronectin 65/75 (N-20): sc-30977

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 muta-genesis of the arginine-glycine-aspartic acid in vitronectin abolishes cell adhesion. J. Biol. Chem. 268: 9725-9729.
6. Stefansson, S., et al. 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; Vtn (mouse) mapping to 11 B5.

SOURCE

Vitronectin 65/75 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Vitronectin 75 of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-30977 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Vitronectin 65/75 (N-20) is recommended for detection of Vitronectin 65/75 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Vitronectin 65/75 (N-20) is also recommended for detection of Vitronectin 65/75 in additional species, including equine.

Suitable for use as control antibody for Vitronectin siRNA (h): sc-36820, Vitronectin siRNA (m): sc-36821, Vitronectin siRNA (r): sc-270256, Vitronectin shRNA Plasmid (h): sc-36820-SH, Vitronectin shRNA Plasmid (m): sc-36821-SH, Vitronectin shRNA Plasmid (r): sc-270256-SH, Vitronectin shRNA (h) Lentiviral Particles: sc-36820-V, Vitronectin shRNA (m) Lentiviral Particles: sc-36821-V and Vitronectin shRNA (r) Lentiviral Particles: sc-270256-V.

Molecular Weight of Vitronectin single chain: 75 kDa.

Molecular Weight of Vitronectin cleaved two-chain forms: 65/10 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or A549 cell lysate: sc-2413.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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