

## DESCRIPTION

|                                                                                                                                                                                                         |                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human                                                                           |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human Vitronectin in direct ELISAs and Western blot.                    |
| <b>Source</b>                                                                                                                                                                                           | Polyclonal Goat IgG                                                             |
| <b>Purification</b>                                                                                                                                                                                     | Antigen Affinity-purified                                                       |
| <b>Immunogen</b>                                                                                                                                                                                        | Human plasma-derived human Vitronectin                                          |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 594<br>Excitation Wavelength: 590 nm<br>Emission Wavelength: 617 nm |
| <b>Formulation</b>                                                                                                                                                                                      | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide                    |
| *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |                                                                                 |

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

**Western Blot** Optimal dilution of this antibody should be experimentally determined.

**Immunohistochemistry** Optimal dilution of this antibody should be experimentally determined.

## PREPARATION AND STORAGE

**Shipping** The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

## BACKGROUND

VN/Vitronectin (vitro-nectin: Latin for "glass" and "to bind to", respectively) is a 65-78 kDa circulating glycoprotein that was initially named for its ability to 1) bind to glass beads, and 2) attach to cell membranes. Also known as somatomedin-B and Serum Spreading Factor, vitronectin is a matricellular protein that belongs to a group of RGD-type adhesive molecules. It is secreted by hepatocytes and circulates as a monomer/homodimer. Upon binding to ECM or PIA-1, it oligomerizes and becomes active. VN acts as a promoter of cell migration and ECM remodeling. It does so by binding to HSPG in the ECM which exposes binding sites for integrins and uPAR on cells. In this context, VN allows for the formation of a uPAR:soluble uPAR:uPA complex that results in the proteolysis of pericellular matrix and subsequent cell migration. Vitronectin also serves as a receptor for circulating PAI-1. When bound, VN forms oligomers that facilitate subsequent binding to vimentin, a cellular intermediate filament. The vimentin:VN:PAI-1 complex is active, and blocks the enzymatic degradation of vascular clots. Human secreted vitronectin is a 459 amino acid (aa) glycoprotein. It can exist as either a 77-78 kDa monomer, or an internal disulfide-linked 65 kDa:10 kDa heterodimer that arises from proteolytic cleavage between Ala398Thr399. VN has multiple domains, including a somatomedin B domain that binds uPAR and PAI-1 (aa 1-40), an RGD motif (aa 64-66) and a heparin-binding region (aa 340-380). VN is sulfated, N- and O-glycosylated, and phosphorylated on at least five Thr/Ser based sites. Over aa 20-29 (i.e.-DQESCKGRCT), human and mouse VN are identical in their amino acid sequences.

## PRODUCT SPECIFIC NOTICES

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