

DESCRIPTION

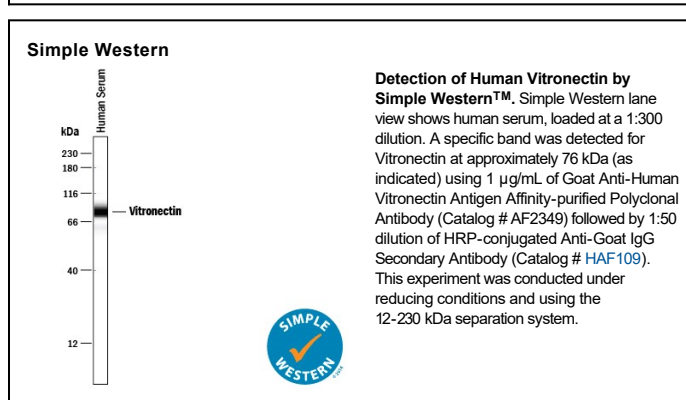
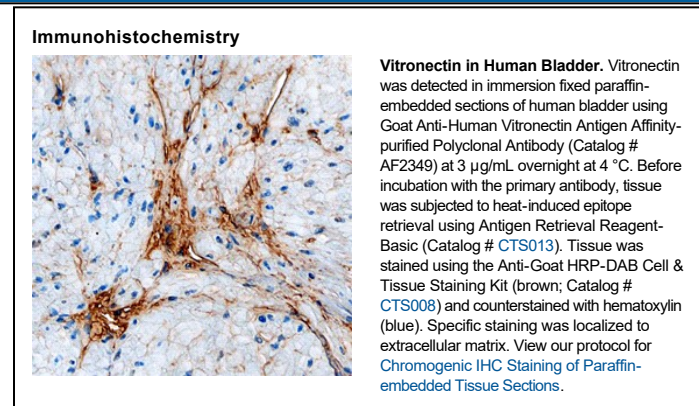
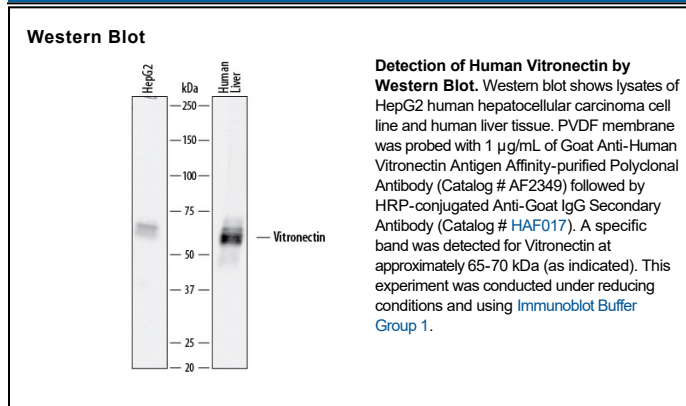
Species Reactivity	Human
Specificity	Detects human Vitronectin in direct ELISAs and Western blot.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Human plasma-derived human Vitronectin
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

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.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunohistochemistry	3-15 µg/mL	See Below
Simple Western	1 µg/mL	See Below

DATA



PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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 to 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.