Data Sheet (Cat.No.TMPY-01861)

TargetMol

Vitronectin Protein, Mouse, Recombinant (His)

General Information

Synonyms:	vitronectin;Vn;AI256434
Protein Construction:	A DNA sequence encoding the mouse vitronectin (NP_035837.1) (Met 1-Lys 478) was expressed, with a polyhistidine tag at the C-terminus. Predicted N terminal: Asp 20
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	P29788
Molecular Weight:	54.2 kDa (predicted); 75-85 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by the ability of the immobilized protein to support the adhesion of DU145 human prostate carcinoma cells. When cells are added to mouse Vitronectin coated plates (10 μg/mL and 100 μL/well), > 60% cells will adhere specifically after 30 minutes at 37 ℃.
Purity:	> 85 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Vitronectin, also known as VTN, is a member of the pexin family. It is an abundant glycoprotein found in serum the extracellular matrix and promotes cell adhesion and spreading. Vitronectin is a secreted protein and exists in either a single chain form or a cleaved, two chain form held together by a disulfide bond. Vitronectin is a plasma glycoprotein implicated as a regulator of diverse physiological process, including blood coagulation, fibrinolysis,

pericellular proteolysis, complement dependent immune responses, and cell attachment and spreading. Because of its ability to bind platelet glycoproteins and mediate platelet adhesion and aggregation at sites of vascular injury, vitronectin has become an important mediator in the pathogenesis of coronary atherosclerosis. As a multifunctional protein with a multiple binding domain, Vitronectin interacts with a variety of plasma and cell proteins. Vitronectin binds multiple ligands, including the soluble vitronectin receptor. It may be an independent predictor of adverse cardiovascular outcomes following acute stenting. Accordingly, Vitronectin is suggested to be involved in hemostasis, cell migration, as well as tumor malignancy.

Reference

Ekmeki OB, et al. (2006) Vitronectin in atherosclerotic disease. Clin Chim Acta. 368(1-2): 77-83.
Derer W, et al. (2009) Vitronectin concentrations predict risk in patients undergoing coronary stenting. Circ Cardiovasc Interv. 2(1): 14-9.
Heyman L, et al. (2010) Mesothelial vitronectin stimulates migration of ovarian cancer cells. Cell Biol Int. 34(5): 493-502.

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