

Recombinant Human Vanin-1/VNN1 Protein

Catalog No.: RP00148 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Human	8876	O95497

Tags

C-His

Synonyms

VNN1;HDLCQ8;Tiff66;vanin 1

Product Information

Source	Purification
HEK293 cells	> 95% by SDS-PAGE.

Calculated MW	Observed MW
53.07 kDa	70-90 kDa

Endotoxin

< 0.1 EU/μg of the protein by LAL method.

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4. Contact us for customized product form or formulation.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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Background

Vanin-1 is a cell membrane protein which belongs to the CN hydrolase family and BTD/VNN subfamily. Vanin-1 contains one CN hydrolase domain. It is widely expressed with higher expression in spleen, kidney and blood. It is overexpressed in lesional psoriatic skin. Vanin-1 is also a member of the Vanin family of proteins which share extensive sequence similarity with each other, and also with biotinidase. The family includes secreted and membrane-associated proteins, a few of which have been reported to participate in hematopoietic cell trafficking. No biotinidase activity has been demonstrated for any of the vanin proteins, however, they possess pantetheinase activity, which may play a role in oxidative-stress response. Vanin-1 is an epithelial pantetheinase that provides cysteamine to tissue and regulates response to stress. Vanin-1 is expressed by enterocytes, and its absence limits intestinal epithelial cell production of proinflammatory signals. Vanin-1 regulates late adhesion steps of thymus homing under physiological, noninflammatory conditions. The early impact of vanin-1 deficiency on tumor induction was directly correlated to the amount of inflammation and subsequent epithelial proliferation rather than cell death rate. Vanin-1 molecule was shown to be involved in the control of thymus reconstitution following sublethal irradiation.

Basic Information

Description

Recombinant Human Vanin-1/VNN1 Protein is produced by HEK293 expression system. The target protein is expressed with sequence (Gln22-Ser490) of human Vanin-1/VNN1 (Accession #NP_004657.2) fused with a 6×His tag at the C-terminus.

Bio-Activity

Measured by its ability to hydrolyze pantetheine to pantothenate and cysteamine. The specific activity is >3000 pmol/min/μg.

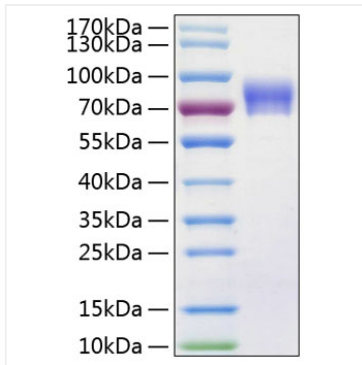
Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

Validation Data



Recombinant Human Vanin-1/VNN1 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 70-90kDa.