

# Human CD111 / Nectin-1 / PVRL1 Protein (His Tag)

Catalog Number: 11611-H08H



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

CD111; CLPED1; ED4; HlgR; HV1S; HVEC; nectin-1; OFC7; PRR; PRR1; PVRR; PVRR1; SK-12

### Protein Construction:

A DNA sequence encoding the human PVRL1 isoform 1 (NP\_002846.3) extracellular domain (Met 1-Thr 334) was expressed, with a polyhistidine tag at the C-terminus.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** > 98 % as determined by SDS-PAGE

### Bio Activity:

**Measured by its binding ability in a functional ELISA . Immobilized PVRL3 at 1 µg/ml (100 µl/well) can bind biotinylated recombinant human PVRL1 / Nectin-1 with a linear range of 6.4-800 ng/ml .**

### Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Gln 31

### Molecular Mass:

The recombinant human PVRL1 consists of 315 amino acids and predicts a molecular mass of 35.4 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rhPVRL1 is approximately 45-50 kDa due to glycosylation.

### Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

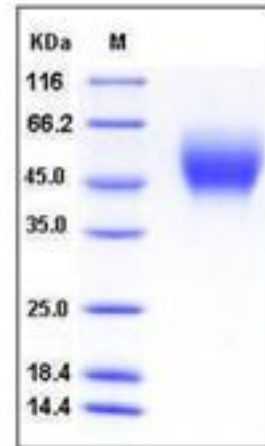
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

Poliovirus receptor-related 1 (herpesvirus entry mediator C; nectin-1; CD111), also known as PVRL1 is a cell adhesion molecule belonging to the immunoglobulin superfamily that can bind to virion glycoprotein D (gD) to mediate entry of herpes simplex viruses (HSV) and pseudorabies virus (PRV). CD111/Nectin-1/PVRL1 colocalizes with E-cadherin at adherens junctions in epithelial cells. The disruption of cell junctions can result in the redistribution of nectin-1. To determine whether disruption of junctions by calcium depletion influenced the susceptibility of epithelial cells to viral entry, Madin-Darby canine kidney cells expressing endogenous nectin-1 or transfected human nectin-1 were tested for the ability to bind soluble forms of viral gD and to be infected by HSV and PRV, before and after calcium depletion. It has been revealed that binding of HSV and PRV gD was localized to adherens junctions in cells maintained in normal medium but was distributed, along with nectin-1, over the entire cell surface after calcium depletion. Both the binding of gD and the fraction of cells that could be infected by HSV-1 and PRV were enhanced by calcium depletion. Taken together, CD111/Nectin-1/PVRL1 confined to adherens junctions in epithelial cells is not very accessible to virus, whereas dissociation of cell junctions releases nectin-1 to serve more efficiently as an entry receptor.

## References

- 1.Yoon M, *et al.* (2002) Disruption of adherens junctions liberates nectin-1 to serve as receptor for herpes simplex virus and pseudorabies virus entry. *J Virol.* 76(14): 7203-8.
- 2.Mata M, *et al.* (2001) HveC (nectin-1) is expressed at high levels in sensory neurons, but not in motor neurons, of the rat peripheral nervous system. *J Neurovirol.* 7(5): 476-80.
- 3.Haarr L, *et al.* (2001) Transcription from the gene encoding the herpesvirus entry receptor nectin-1 (HveC) in nervous tissue of adult mouse. *Virology.* 287(2): 301-9.

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