



Catalog Number: 80244-R02H

## General Information

### Gene Name Synonym:

CD111; CLPED1; ED4; HlgR; HV1S; HVEC; nectin-1; OFC7; PRR; PRR1; PVRR; PVRR1; SK-12; AI835281; AW549174; Cd111; HlgR; HveC; nectin-1; PRR; PRR1

### Protein Construction:

A DNA sequence encoding the rat PVRL1 (XP\_236210.3) (Met1-Ala354) was expressed, fused with the Fc region of human IgG1 at the C-terminus.

**Source:** Rat

**Expression Host:** Human Cells

## QC Testing

**Purity:** > 90 % as determined by SDS-PAGE

### 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 rat PVRL1/Fc is a disulfide-linked homodimer. The reduced monomer comprises 565 amino acids and has a predicted molecular mass of 63.3 kDa. The apparent molecular mass of the protein is approximately 88-98 kDa in SDS-PAGE under reducing conditions.

### 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:

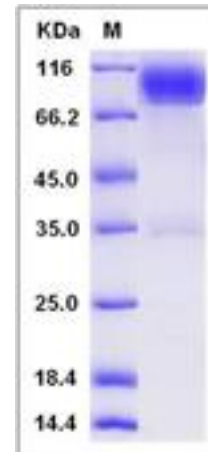
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**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.