



Recombinant Protein Technical Manual  
Recombinant Human CLEC4A/DCIR Protein (His Tag)  
RPES1477

#### Product Data:

**Product SKU:** RPES1477

**Size:** 20µg

**Species:** Human

**Expression host:** HEK293 Cells

**Uniprot:** NP\_057268.1

#### Protein Information:

**Molecular Mass:** 22 kDa

**AP Molecular Mass:** 28 kDa

**Tag:** N-His

**Bio-activity:**

**Purity:** > 95 % as determined by reducing SDS-PAGE.

**Endotoxin:** < 1.0 EU per µg as determined by the LAL method.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from sterile PBS, pH 7.4

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** CD367;CLEC4A;CLECSF6;DCIR;DDB27;HDCGC13P;LLIR

## Immunogen Information:

**Sequence:** Gln 70-Leu 237

## Background:

Dendritic cell immunoreceptor (DCIR), also known as C-type lectin domain family 4 member A (CLEC4A), C-type lectin superfamily member 6 (CLECSF6), is a single-pass type II C-type lectin receptor expressed mainly in dendritic cells (DCs), which is a negative regulator of DC expansion and has a crucial role in maintaining the homeostasis of the immune system. The Dectin-2 family of C-type lectins that includes Dectin-2, BDCA-2, DCIR, DCAR, Clecsf8 and Mincle. These type II receptors contain a single extracellular carbohydrate recognition domain and have diverse functions in both immunity and homeostasis. DCIR is the only member of the family which contains a cytoplasmic signalling motif and has been shown to act as an inhibitory receptor, while BDCA-2, Dectin-2, DCAR and Mincle all associate with FcRgamma chain to induce cellular activation, including phagocytosis and cytokine production. Dectin-2 and Mincle have been shown to act as pattern recognition receptors for fungi, while DCIR acts as an attachment factor for HIV. In addition to pathogen recognition, DCIR has been shown to be pivotal in preventing autoimmune disease by controlling dendritic cell proliferation. DCIR expressed on antigen presenting cells and granulocytes and acts as an inhibitory receptor via an intracellular immunoreceptor tyrosine-based inhibitory motif (ITIM). It may also be involved via its ITIM motif in the inhibition of B-cell-receptor-mediated calcium mobilization and protein tyrosine phosphorylation. Additionally, DCIR can participate in the capture of HIV and promote infection in trans and in cis of autologous CD4(+) T cells from human immature monocyte-derived DCs. DCIR acts as a ligand for HIV and is involved in events leading to productive virus infection.