# Recombinant Human DCIR/CLEC4A

Catalog Number: 9784-CI

## DESCRIPTION

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|---|---|
| **Source** | Mouse myeloma cell line, NS0-derived<br>Gln70-Leu237, with an N-terminal 10-His tag<br>Accession # Q9UMR7-1 |
| **N-terminal Sequence Analysis** | His |
| **Predicted Molecular Mass** | 21 kDa |

## SPECIFICATIONS

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| **SDS-PAGE** | 23-38 kDa, reducing conditions |
| **Activity** | Measured by the ability of the immobilized protein to support the adhesion of SW480 human fibroblast carcinoma cells. The $ED_{50}$ for this effect is 0.8-6.4 µg/mL. |
| **Endotoxin Level** | <0.10 EU per 1 µg of the protein by the LAL method. |
| **Purity** | >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining. |
| **Formulation** | Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details. |

## PREPARATION AND STORAGE

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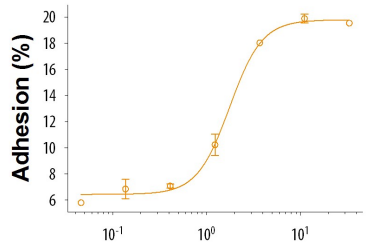
| **Reconstitution** | Reconstitute at 250 µg/mL in PBS. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. |
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**<br>● 12 months from date of receipt, -20 to -70 °C as supplied.<br>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>● 3 months, -20 to -70 °C under sterile conditions after reconstitution. |

## DATA

**Bioactivity**




Recombinant Human DCIR/CLEC4A (Catalog # 9784-CI) supports the adhesion of SW480 human fibroblast carcinoma cells. The $ED_{50}$ for this effect is 0.8-6.4 µg/mL.

## BACKGROUND

DCIR (Dendritic Cell Immunoreceptor), also known as Lectin-like Immunoreceptor (LLIR), is a type II membrane protein belonging to the C-type lectin domain family and is designated CLEC4A (previously designated CLECSF6). Four transcript variants encoding distinct isoforms have been identified (1, 2). DCIR contains one carbohydrate recognition domain in its C-terminal extracellular domain and an immunoreceptor tyrosine-based inhibitory motif (ITIM) in its cytoplasmic domain (3). Crystal structure identifies the nonterminal disaccharide GlcNAcβ1-2Man as its primary binding epitope (4). Human DCIR consists of 237 amino acids (aa) with a 48 aa cytoplasmic domain, a 21 aa transmembrane region, and a 168 aa extracellular domain. Human DCIR shares approximately 56% amino acid identity with the mouser version and 55% amino acid identity with the rat version of the protein. Besides dendritic cell, DCIR is expressed on B cells, monocytes/macrophages and granulocytes. It acts as a mannose/fucose lectin and interacts with targets of both endogenous and pathogenic origin (5), binding sugars with broad specificity in a calcium-dependent manner (4). DCIR is critically important for the homeostasis of the immune system. DCIR can inhibit B cell receptor mediated calcium mobilization and protein tyrosine phosphorylation through its intracellular ITIM Motif (6, 7). It can interact directly with the HIV-1 virus thus modulate HIV-1 transmission (8). Recent study has demonstrated that DCIR-specific ligands are present on various cancer cell lines and keratinocytes (5).

**References:**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