CD367/CLEC4A Protein, Rat (HEK293, His)

Cat. No.:	HY-P77332
Synonyms:	C-type lectin domain family 4 member A; CD367; Clec4a; Clec4a2; Clecsf6; Dcir
Species:	Rat
Source:	HEK293
Accession:	Q5YIS1 (Q70-S235)
Gene ID:	297584
Molecular Weight:	Approximately 25-33 kDa due to the glycosylation.

PROPERTIES

AA Sequence	Q K Y S Q L L E E K K A L T D K T L N D L N C T K N V S L T E D K A C S C C L K D W K S F G S Y C Y F T S T D S K A T W D E S K E K C S R M G A H L L V I H S Q D E Q D F I N T I L N I G T D Y F I G L S D H S E N Q W Q W I D Q T P Y N E S V T F W H K G E P N N K E E K C V V I N H R D K W G W N D I P C H D R H K S V C Q V K K I H S
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	CD367/CLEC4A protein functions as a C-type lectin receptor with a preference for binding carbohydrates mannose and fucose, and a weaker interaction with N-acetylglucosamine (GlcNAc) in a Ca(2+)-dependent manner. This receptor plays a crucial role in regulating immune reactivity and, upon antigen triggering, undergoes internalization through clathrin-dependent endocytosis. Consequently, it delivers its antigenic cargo into the antigen presentation pathway, leading to the cross-priming of CD8(+) T cells. Notably, this cross-presentation and cross-priming are augmented by TLR7 and TLR8 agonists, resulting in increased expansion of CD8(+) T cells and heightened production of IFNG and TNF, while reducing levels of IL4, IL5, and IL13. In plasmacytoid dendritic cells, CD367/CLEC4A inhibits TLR9-mediated IFNA and TNF production.

Furthermore, it may be involved in the inhibition of B-cell-receptor-mediated calcium mobilization and protein tyrosine phosphorylation via its ITIM motif (immunoreceptor tyrosine-based inhibitory motifs). In the context of microbial infection, CD367/CLEC4A is implicated in the interaction between HIV-1 virus and dendritic cells, enhancing HIV-1 binding and virus infection through an ITIM motif-associated signal transduction pathway involving phosphatases PTPN6 and PTPN11, SYK, Src kinases, and MAP kinases.

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