Recombinant CL12A protein (His tag)

Catalog Number	545141
Synonyms	C-type lectin-like molecule 1; CLL-1; Dendritic cell-associated lectin 2; DCAL-2; Killer cell C-type lectin-like receptor L1; hKLRL1; Myeloid inhibitory C-type lectin-like receptor; MICL; CD antigen CD371
Species	Human
Expression System	E. coli
Accession	Q5QGZ9
Molecular Weight	Predictes a molecular mass of 25.38 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 25 kDa band.

Product Information

Sequence Region	65-265
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 65-265 aa (Q5QGZ9) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human CLEC12A (C-type lectin domain family 12 member A) Fragment (aa 65-265) is a high-purity protein encompassing the complete C-type lectin domain (aa 140-249). This fragment serves as an essential tool for investigating the inhibitory signaling functions of CLEC12A, a key myeloid immunoregulatory receptor involved in controlling inflammation and immune cell activation. CLEC12A, also known as MICL or CD371, is a myeloid inhibitory C-type lectin receptor that acts as a negative regulator of myeloid cell activation, helping to limit proinflammatory pathways and prevent excessive inflammation. This transmembrane protein functions as a pattern-recognition receptor that specifically binds various structures including neutrophil extracellular traps (NETs), monosodium urate crystals, pathogen-associated molecules such as plasmodium hemozoin and mycobacterial mycolic acid. Upon ligand binding, CLEC12A undergoes ITIM motif phosphorylation, recruiting tyrosine-protein phosphatases PTPN6 and PTPN11 to counteract SYK kinase signaling, thereby inhibiting myeloid cell activation. The receptor also regulates neutrophil responses by limiting NET formation, modulates natural killer cell cytotoxicity, and inhibits dendritic cell maturation through IL10-dependent mechanisms. Located primarily at the cell membrane, CLEC12A internalizes upon ligand binding and clusters at phagocytic vesicles during monosodium urate crystal recognition, playing crucial roles in immune homeostasis and inflammatory control.