Recombinant CLC10 protein (His tag)

Catalog Number	545371
Synonyms	C-type lectin superfamily member 14; DC-asialoglycoprotein receptor; DC-ASGPR; Macrophage galactose-type lectin; MGL; Macrophage lectin 2; CD antigen CD301
Species	Human
Expression System	E. coli
Accession	Q8IUN9
Molecular Weight	Predictes a molecular mass of 30.43 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 31 kDa band.

Product Information

Sequence Region	61-316
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, 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 61-316 aa (Q8IUN9) 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 CLEC10A (C-type lectin domain family 10 member A) Fragment (aa 61-316) - a high-purity protein fragment containing the complete C-type lectin domain (aa 188-305). This fragment serves as an essential tool for studying carbohydrate recognition, antigen presentation, and immune modulation mechanisms in myeloid cells, particularly in cancer immunology and autoimmune research. CLEC10A, also known as Macrophage Galactose-type Lectin (MGL) or CD301, is a C-type lectin receptor expressed on myeloid antigen presenting cells that specifically recognizes N-acetylgalactosamine (GalNAc)-terminated glycans in a calcium-dependent manner. This receptor binds to various glycoprotein and glycolipid antigens including Tn and T antigens, LacdiNAc epitopes, and gangliosides. Functionally, CLEC10A operates at the interface of APC-T cell interactions, where it recognizes Tn antigen-carrying CD45 on effector T cells to modulate T cell activation thresholds and cytokine production. It promotes dendritic cell maturation toward a tolerogenic phenotype, generating regulatory CD4+ T cells with immunosuppressive functions. Additionally, CLEC10A serves as an endocytic pattern recognition receptor in antitumor immunity, internalizing Tn-terminated tumor antigens for MHC class I and II presentation to CD8+ and CD4+ T cells, respectively. The protein localizes to the cell membrane and recycles through early endosomes and lysosomes, dissociating from antigens at acidic pH in endolysosomal compartments.