Recombinant CLC7A protein (His tag)

Catalog Number	548152
Synonyms	Beta-glucan receptor; C-type lectin superfamily member 12; Dendritic cell-associated C-type lectin 1; DC-associated C-type lectin 1; Dectin-1; CD antigen CD369
Species	Human
Expression System	E. coli
Accession	Q9BXN2
Molecular Weight	Predictes a molecular mass of 16.64 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 17 kDa band.

Product Information

Sequence Region	117-247
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 117-247 aa (Q9BXN2) 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 CLEC7A (C-type lectin domain family 7 member A) Fragment (aa 117-247) - A high-purity protein fragment containing the complete C-type lectin domain, ideal for studying beta-glucan recognition and innate immune responses. This fragment serves as an excellent tool for investigating pattern recognition receptor function without the full transmembrane complexity. CLEC7A, also known as Dectin-1 or CD369, functions as a pattern recognition receptor specifically targeting beta-1,3-linked and beta-1,6-linked glucans found in bacterial and fungal cell walls. As a key component of innate immunity, it mediates the TLR2-dependent inflammatory response by recruiting SYK via its ITAM motif, activating NF-kappa-B and MAP kinase p38 pathways that drive pro-inflammatory cytokine and chemokine production. The protein also facilitates phagocytosis of fungal pathogens like C. albicans and enhances reactive oxygen species production in immune cells. Located primarily on the cell membrane as a single-pass type II membrane protein, CLEC7A plays critical roles in macrophage and dendritic cell cytokine production and T-cell activation, making it essential for understanding host-pathogen interactions and immune regulation.