# Recombinant DMA protein (His tag)

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| **Catalog Number** | 542236 |
| **Synonyms** | MHC class II antigen DMA; Really interesting new gene 6 protein |
| **Species** | Human |
| **Expression System** | E. coli |
| **Accession** | P28067 |
| **Molecular Weight** | Predictes a molecular mass of 23.84 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 24 kDa band. |

## Product Information

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| **Sequence Region** | 38-233 |
| **Form** | Lyophilized powder |
| **Formulation** | Lyophilized from sterile PBS, pH 7.4 |
| **Purity** | >86%, 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 38-233 aa (P28067) were fused with 6His tag. |

## Storage & Handling

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| **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.<br>Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise. |

## Description

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| **Description** | Introducing the recombinant HLA-DMA (38-233) fragment, a meticulously engineered protein encompassing the Ig-like C1-type domain of the HLA class II histocompatibility antigen, DM alpha chain. This product is an essential tool for researchers investigating MHC class II antigen presentation pathways, enabling focused study on domain-specific functions in peptide loading and immune regulation.<br>The full-length HLA-DMA protein, encoded by the HLA-DMA gene in humans, plays a critical role in the adaptive immune system by catalyzing the release of the class II-associated invariant chain peptide (CLIP) from newly synthesized MHC class II molecules. This activity is essential for freeing the peptide-binding site, allowing the acquisition of antigenic peptides and proper antigen presentation. In B-cells, HLA-DM's interaction with MHC class II is regulated by HLA-DO, highlighting its importance in immune response modulation. The protein localizes to late endosome and lysosome membranes as a single-pass type I membrane protein, where it functions in the late endocytic compartment, underscoring its role in intracellular antigen processing and presentation pathways. |