Recombinant DRB3 protein (His tag)

Catalog Number	540130
Synonyms	MHC class II antigen DRB3
Species	Human
Expression System	E. coli
Accession	P79483
Molecular Weight	Predictes a molecular mass of 24.60 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 25 kDa band.

Product Information

Sequence Region	30-227
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 30-227 aa (P79483) 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 HLA-DRB3 (30-227) Fragment: A high-purity, functional protein fragment encompassing the Ig-like C1-type domain of the HLA class II histocompatibility antigen, DR beta 3 chain. This product is engineered for researchers studying antigen presentation, T-cell activation, and immune responses in infectious diseases, cancer immunology, and autoimmune disorders. The full-length HLA-DRB3 protein is a beta chain component of the major histocompatibility complex class II (MHCII) molecule, which forms a complex with HLA-DRA. It plays a critical role in adaptive immunity by presenting antigenic peptides (typically 10–30 amino acids from extracellular, lysosomal, or autolysosomal sources) on professional antigen-presenting cells to CD4-positive T cells. This interaction guides T-helper effector functions, including antibody-mediated responses and macrophage activation, to eliminate pathogens and transformed cells. The protein is localized to the cell membrane, endoplasmic reticulum, lysosomes, late endosomes, and autolysosomes, trafficking through endocytic pathways for antigen presentation. Specific alleles (e.g., DRB3*01:01, *02:02, *03:01) present epitopes from pathogens like C. tetani, HHV-6B, EBV, Dengue virus, and M. tuberculosis, as well as tumor-associated antigens (e.g., WT1, NY-ESO-1), highlighting its importance in infectious disease control, tumor immunosurveillance, and immune tolerance.