Recombinant IMA5 protein (His tag)

Catalog Number	542403
Synonyms	Karyopherin subunit alpha-1; Nucleoprotein interactor 1; NPI-1; RAG cohort protein 2; SRP1-beta
Species	Human
Expression System	E. coli
Accession	P52294
Molecular Weight	Predictes a molecular mass of 52.39 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 53 kDa band.

Product Information

Sequence Region	82-538
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 82-538 aa (P52294) 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 Importin subunit alpha-5 (KPNA1) fragment (residues 82-538) from Homo sapiens, designed for structural and biochemical studies. This 457-amino acid fragment offers a stable, soluble unit ideal for investigating nuclear import mechanisms and protein-protein interactions in cellular transport pathways. Importin subunit alpha-5 (KPNA1) functions as a critical adapter in nuclear protein import, binding directly to substrates containing classical nuclear localization signals (NLS). It partners with KPNB1 to facilitate docking and translocation through nuclear pore complexes via a Ran-GTPase-dependent mechanism. The protein localizes to both cytoplasm and nucleus, dynamically shuttling to mediate nuclear import of cellular proteins like BAP1 and viral proteins such as HCMV UL84. This fragment represents a computationally optimized region that maintains key functional characteristics while enhancing experimental utility for structural analysis.