# Recombinant IMA7 protein (His tag)

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| **Catalog Number** | 539519 |
| **Synonyms** | Karyopherin subunit alpha-6 |
| **Species** | Human |
| **Expression System** | E. coli |
| **Accession** | O60684 |
| **Molecular Weight** | Predictes a molecular mass of 52.40 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 54 kDa band. |

## Product Information

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| **Sequence Region** | 79-536 |
| **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 79-536 aa (O60684) 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** | Recombinant Importin subunit alpha-7 (KPNA6) fragment (residues 79-536) from Homo sapiens, designed for structural and biochemical studies. This soluble, stable protein unit facilitates nuclear import by serving as an adapter for nuclear localization signal (NLS)-containing substrates, making it ideal for investigating nucleocytoplasmic transport mechanisms.<br>Importin subunit alpha-7, encoded by the KPNA6 gene, functions as a critical adapter in nuclear protein import. It binds directly to substrates with simple or bipartite nuclear localization signals (NLS) and partners with KPNB1 (importin-beta) to dock at the nuclear pore complex. The import process is Ran-dependent and energy-driven, with directionality maintained by the asymmetric distribution of Ran-GTP/Ran-GDP across the nuclear envelope. This protein plays a key role in regulating the transport of nuclear proteins, as evidenced by its involvement in specific import pathways (ECO:0000269\|PubMed:10523667). |