

Recombinant Mouse IMA7 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51151

Size: 10ug, 100ug

Protein Name: Importin subunit alpha-7 (Importin alpha-S2) (Karyopherin subunit alpha-6)

Synonym: Kpna6, Kpna5

UniProt ID: O35345

UniProt Link: www.uniprot.org/uniprotkb/O35345/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 536 AA

Molecular Weight: 60 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

METMASPGKDNRYRMKSYKNNALNPEEMRRRRREEEGIQLRKQKREQQLFKRRNVELINEEAAMFDS
LLMDSYVSSTTGESVITREMVEMLFSDDSLQATTQKFRKLLSKEPSPPIDEVINTPGVVDRFVEFL
KRNENCTLQFEAAWALTNIASGTSQQTKIVIEAGAVPIFIELLNDFEDVQEQAVWALGNIAGDSSLC
RDYVLNCSILNPLLTLTKSTRLTMTRNAVWALSNLCRGKNPPPEFAKVSPCLPVLSRLLFSSDSDL
ADACWALSYSLSDGPNEKIQAVIDSGVCRRLLVELLMHNDYKVASPALRAVGNIVTGDDIQTQVILNCSA
LPCLLHLLSSSKESIRKEACWTISNITAGNRAQIQAVIDANIFPVLIEILQKAEFRTRKEAAWAITNATSG
GTPEQIRYLVSLGCIKPLCDLLTVMDSKIVQVALNGLENILRLGEQESKRSGSGVNPYCGLIEEAYGLD
KIEFLQSHENQEIQKAFDLIEHYFGVEDDDSSLAPQVDETQQQFIFQQPEAPMEGFQL

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Importin subunit alpha-7 (Importin alpha-S2) (Karyopherin subunit alpha-6) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Functions in nuclear protein import as an adapter protein for nuclear receptor KPNB1. Binds specifically and directly to substrates containing either a simple or bipartite NLS motif. Docking of the importin/substrate complex to the nuclear pore complex (NPC) is mediated by KPNB1 through binding to nucleoporin FxFG repeats and the complex is subsequently translocated through the pore by an energy requiring, Ran-dependent mechanism. At the nucleoplasmic side of the NPC, Ran binds to importin-beta and the three components separate and importin-alpha and -beta are re-exported from the nucleus to the cytoplasm where GTP hydrolysis releases Ran from importin. The directionality of nuclear import is thought to be conferred by an asymmetric distribution of the GTP- and GDP-bound forms of Ran between the cytoplasm and nucleus.

Subcellular Localization: Cytoplasm.

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.