

## Recombinant Human KPNA1 Protein (8-538 aa), His-tagged

**Cat. No.** KPNA1-608H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| <b>Product Overview</b> | Recombinant Human KPNA1 Protein (8-538 aa) is produced by E. coli expression system. This protein is fused with a 6xHis tag at the N-terminal. Protein Description: Partial.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>ProteinLength</b>    | 8-538 aa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Description</b>      | 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. |
| <b>Form</b>             | Tris-based buffer, 50% glycerol                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Molecular Mass</b>   | 63.5 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

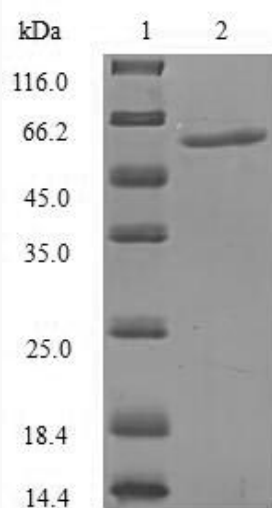
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|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>AA Sequence</b>      | <p>NFRLKSYKNKSLNPDEMRRRREEEGLQLRKQKREEQLFKRRNVATAEEETEEVLM<br/> SDGGFHEAQISNMEMAPGGVITSDMIEMIFSKSPEQQLSATQKFRKLLSKEPNPPID<br/> EVISTPGVVARFVEFLKRKENCTLQFESAWVLTNIASGNSLQTRIVIQAGAVPIFIELLS<br/> SEFEDVQEQAVALGNIAGDSTMCRDYVLDCNLPPLLQLFSKQNRLLTMTRNAVWA<br/> LSNLCRGKSPPEFAKVSPCLNVLSWLLFVSDTDVLADACWALSYSYSDGPNDDKIQAV<br/> IDAGVCRRLVELLMHNDYKVVSPALRAVGNIVTGDDIQTQVILNCSALQSLLHLLSSP<br/> KESIKKEACWTISNITAGNRAQIQTVIDANIFPALISILQTAEFRTTRKEAAWAITNATSG<br/> GSAEQIKYLVELGCIKPLCDLLTVMDSKIVQVALNGLNLRGEQEAKRNGTGINPY<br/> CALIEEAYGLDKIEFLQSHENQEIQKAFDLIEHYFGTEDEDSSIAPQVDLNQQQYIFQ<br/> QCEAPMEGFQL</p> |
| <b>Purity</b>           | > 90% as determined by SDS-PAGE.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Notes</b>            | Repeated freezing and thawing is not recommended. Store working aliquots at 4 centigrade for up to one week.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Storage</b>          | The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20 centigrade/-80 centigrade. The shelf life of lyophilized form is 12 months at -20 centigrade/-80 centigrade.                                                                                                                                                                                                                                                                                           |
| <b>Concentration</b>    | A hardcopy of COA with concentration instruction is sent along with the products.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>GENE INFORMATION</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Gene Name</b>        | KPNA1 karyopherin alpha 1 (importin alpha 5) [ Homo sapiens ]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Official Symbol</b>  | KPNA1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Synonyms</b>         | KPNA1; IPOA5; NPI 1; RCH2; SRP1; SRP1-beta; importin alpha 5; NPI-1;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

|                |           |
|----------------|-----------|
| Gene ID        | 3836      |
| mRNA Refseq    | NM_002264 |
| Protein Refseq | NP_002255 |
| MIM            | 600686    |
| UniProt ID     | P52294    |



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.