

## Recombinant Human IRAK4 Protein (E154-S460), Tag Free

**Cat. No.** IRAK4-1168H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| <b>Product Overview</b> | Recombinant Human IRAK4(E154-S460 end) Protein was expressed in Insect cell.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Source</b>           | Insect Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>ProteinLength</b>    | E154-S460                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Description</b>      | <p>Serine/threonine-protein kinase that plays a critical role in initiating innate immune response against foreign pathogens. Involved in Toll-like receptor (TLR) and IL-1R signaling pathways. Is rapidly recruited by MYD88 to the receptor-signaling complex upon TLR activation to form the Myddosome together with IRAK2. Phosphorylates initially IRAK1, thus stimulating the kinase activity and intensive autophosphorylation of IRAK1. Phosphorylates E3 ubiquitin ligases Pellino proteins (PELI1, PELI2 and PELI3) to promote pellino-mediated polyubiquitination of IRAK1. Then, the ubiquitin-binding domain of IKBKG/NEMO binds to polyubiquitinated IRAK1 bringing together the IRAK1-MAP3K7/TAK1-TRAF6 complex and the NEMO-IKKA-IKKB complex. In turn, MAP3K7/TAK1 activates IKKs (CHUK/IKKA and IKBKB/IKKB) leading to NF-kappa-B nuclear translocation and activation. Alternatively, phosphorylates TIRAP to promote its ubiquitination and subsequent degradation. Phosphorylates NCF1 and regulates NADPH oxidase activation after LPS stimulation suggesting a similar mechanism during microbial infections.</p> |
| <b>Form</b>             | Liquid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

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|                       |                                                                                                                                                                     |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Endotoxin</b>      | < 0.01 EU per µg of the protein                                                                                                                                     |
| <b>Purity</b>         | 90%                                                                                                                                                                 |
| <b>Stability</b>      | Samples are stable for up to twelve months from date of receipt at -20 to -80 centigrade.                                                                           |
| <b>Storage</b>        | Store it under sterile conditions at -20 to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. |
| <b>Storage Buffer</b> | Supplied as sterile 50 mM Tris-HCl (pH7.5), 200 mM NaCl, 20% glycerol                                                                                               |
| <b>Shipping</b>       | It is shipped out with blue ice.                                                                                                                                    |

## GENE INFORMATION

|                        |                                                                                                                                  |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | IRAK4 interleukin-1 receptor-associated kinase 4 [ Homo sapiens (human) ]                                                        |
| <b>Official Symbol</b> | IRAK4                                                                                                                            |
| <b>Synonyms</b>        | IRAK4; interleukin-1 receptor-associated kinase 4; NY REN 64; renal carcinoma antigen NY-REN-64; IPD1; REN64; IRAK-4; NY-REN-64; |
| <b>Gene ID</b>         | 51135                                                                                                                            |
| <b>mRNA Refseq</b>     | NM_001114182                                                                                                                     |
| <b>Protein Refseq</b>  | NP_001107654                                                                                                                     |
| <b>MIM</b>             | 606883                                                                                                                           |

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UniProt ID

Q9NWZ3

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