

## Recombinant Human HYOU1, His-tagged

**Cat. No.** HYOU1-30518TH    **Lot. No.** (See product label)

### SPECIFICATION

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| <b>Product Overview</b> | Recombinant fragment, corresponding to amino acids 424-999 of Human ORP150 with N terminal His tag; Predicted MWt 65 kDa. |
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| <b>Species</b> | Human |
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| <b>Source</b> | E.coli |
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| <b>ProteinLength</b> | 424-999 a.a. |
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| <b>Description</b> | <p>The protein encoded by this gene belongs to the heat shock protein 70 family. This gene uses alternative transcription start sites. A cis-acting segment found in the 5' UTR is involved in stress-dependent induction, resulting in the accumulation of this protein in the endoplasmic reticulum (ER) under hypoxic conditions. The protein encoded by this gene is thought to play an important role in protein folding and secretion in the ER. Since suppression of the protein is associated with accelerated apoptosis, it is also suggested to have an important cytoprotective role in hypoxia-induced cellular perturbation. This protein has been shown to be up-regulated in tumors, especially in breast tumors, and thus it is associated with tumor invasiveness. This gene also has an alternative translation initiation site, resulting in a protein that lacks the N-terminal signal peptide. This signal peptide-lacking protein, which is only 3 amino acids shorter than the mature protein in the ER, is thought to have a housekeeping function in the cytosol. In rat, this protein localizes to both the ER by a carboxy-terminal peptide sequence and to mitochondria by an amino-terminal targeting signal.</p> |
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| <b>Conjugation</b>              | HIS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Tissue specificity</b>       | Highly expressed in tissues that contain well-developed endoplasmic reticulum and synthesize large amounts of secretory proteins. Highly expressed in liver and pancreas and lower expression in brain and kidney. Also expressed in macrophages within aortic                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Form</b>                     | Lyophilised:Reconstitute with 129 µl aqua dest.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Storage buffer</b>           | Preservative: NoneConstituents: 0.5% Trehalose, 6M Urea, 100mM Sodium phosphate, 10mM Sodium chloride, pH 4.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Storage</b>                  | Shipped at 4°C. Upon delivery aliquot and store at -80oC. Avoid freeze / thaw cycles.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Sequences of amino acids</b> | AALSKAFKVKPFVVRDAVVYPILVEFTREVEEEPGIHSLK HNKRVLF SRMGYPYQQRK<br>VITFNRYSHDFNFHINYGDLG FLGPEDLRVFGSQNLTTVKLKGVGDSFKKYPDYESK<br>GI KAHFNLDSEGVLSLDRVESVFETLVEDSAEEESTLTKL GNTISSLFGGGTTTPDAK<br>ENGTDTVQEEEESPAEGSKDEPGEQVELKEEAEAPVEDGSQPPPPEPKGDATPEG<br>EKATEK ENGDKSEAQKPSEKAEAGPEGVAPAPEGEKKQKPARKR RMVEEIGVELV<br>VLDLPDLPEDKLAQSVQKLQDLTLRDL EKQEREKAANSLEAFIFETQDKLYQPEYQE<br>VSTEEQRE EISGKL SAASTWLEDEGVGATTVMLKEKLAELRKLCQGLFFRVEERKK<br>WPERLSALDNLLNHSSMFLKGARLIPEMDQ IFTEVEMTTLEKVINETWAWKNATLAE<br>QAKLPATEKPV LLSKDIEAKMMALDREVQYLLNKAFTKPRPRPKDKNG TRAEPL<br>NASASDQGEKVIPPAGQTEDAEPISEPEKVE TGSEPGDTEPLELGGPGAEPPEQKEQ<br>STGQKRPLKNDEL |
| <b>Sequence Similarities</b>    | Belongs to the heat shock protein 70 family.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

## GENE INFORMATION

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| <b>Gene Name</b>           | HYOU1 hypoxia up-regulated 1 [ Homo sapiens ]                                                                                                                                                                                                                                                                           |
| <b>Official Symbol</b>     | HYOU1                                                                                                                                                                                                                                                                                                                   |
| <b>Synonyms</b>            | HYOU1; hypoxia up-regulated 1; hypoxia up-regulated protein 1; glucose regulated protein 170; Grp170; HSP12A; ORP150;                                                                                                                                                                                                   |
| <b>Gene ID</b>             | 10525                                                                                                                                                                                                                                                                                                                   |
| <b>mRNA Refseq</b>         | NM_001130991                                                                                                                                                                                                                                                                                                            |
| <b>Protein Refseq</b>      | NP_001124463                                                                                                                                                                                                                                                                                                            |
| <b>MIM</b>                 | 601746                                                                                                                                                                                                                                                                                                                  |
| <b>Uniprot ID</b>          | Q9Y4L1                                                                                                                                                                                                                                                                                                                  |
| <b>Chromosome Location</b> | 11q23.1-q23.3                                                                                                                                                                                                                                                                                                           |
| <b>Pathway</b>             | Activation of Chaperones by IRE1alpha, organism-specific biosystem; Diabetes pathways, organism-specific biosystem; Protein processing in endoplasmic reticulum, organism-specific biosystem; Protein processing in endoplasmic reticulum, conserved biosystem; Unfolded Protein Response, organism-specific biosystem; |
| <b>Function</b>            | ATP binding; nucleotide binding;                                                                                                                                                                                                                                                                                        |