

# Recombinant Human ORP150/HSP12A Protein (His Tag)



Catalog Number:PKSH031144

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

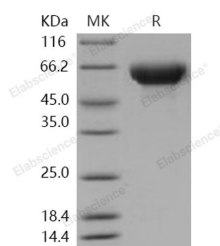
## Description

<b>Synonyms</b>	Hypoxia up-regulated protein 1;150 kDa oxygen-regulated protein;ORP-150;170 kDa glucose-regulated protein;GRP-170;HYOU1;ORP150;Grp170;HSP12A
<b>Species</b>	Human
<b>Expression Host</b>	HEK293 Cells
<b>Sequence</b>	Met 695-Leu 994
<b>Accession</b>	NP_001124463.1
<b>Calculated Molecular Weight</b>	35.2 kDa
<b>Observed molecular weight</b>	55-65 kDa
<b>Tag</b>	C-His

## Properties

<b>Purity</b>	> 97 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per µg of the protein as determined by the LAL method.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from sterile PBS, pH 7.4 Normally 5 % - 8 % trehalose, mannitol and 0.01 % Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

## Data



> 97 % as determined by reducing SDS-PAGE.

## Background

Hypoxia up-regulated protein 1, also known as 150 kDa oxygen-regulated protein, 170 kDa glucose-regulated protein, ORP-150, GRP-170 and HYOU1, is a member of the heat shock protein 70 family. Seven members from four different heat shock protein (HSP) families were identified including HYOU1 (ORP150), HSPC1 (HSP86), HSPA5 (Bip), HSPD1 (HSP60), and several isoforms of the two testis-specific HSP70 chaperones HSPA2 and HSPA1L. HYOU1 is highly expressed in tissues that contain well-developed endoplasmic reticulum and synthesize large amounts of secretory proteins. It is highly expressed in liver and pancreas. HYOU1 is also expressed in macrophages within aortic atherosclerotic plaques, and in breast cancers. HYOU1 has a pivotal role in cytoprotective cellular mechanisms triggered

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by oxygen deprivation. It may play a role as a molecular chaperone and participate in protein folding. Suppression of HYOU1 is associated with accelerated apoptosis. It is 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.

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