

# ORP150 (E-16): sc-243687

## BACKGROUND

ORP150, also known as HYOU1 (hypoxia upregulated 1), is a 999 amino acid protein that localizes to the lumen of the endoplasmic reticulum (ER) and is a member of the heat shock protein 70 (HSP 70) family. ORP150 is highly expressed in tissues that have well-developed ERs and a large number of secretory proteins (such as liver and pancreas). It is expressed at lower levels in kidney and brain, and plays an essential role in cytoprotective cellular responses to hypoxia (oxygen deprivation). Specifically, ORP150 participates in protein folding and secretion in the ER and functions to protect cells from hypoxia-induced apoptosis, thereby playing a crucial role in cell survival. ORP150 expression is upregulated in a variety of tumors, such as breast cancer, suggesting an important role in tumorigenesis. The gene encoding ORP150 has two translation initiation sites, resulting in a truncated transcript that lacks an ER signal peptide, but is thought to function as a house-keeping protein in the cytoplasm.

## REFERENCES

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- Takeuchi, S. 2006. Molecular cloning, sequence, function and structural basis of human heart 150 kDa oxygen-regulated protein, an ER chaperone. *Protein J.* 25: 517-528.
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## CHROMOSOMAL LOCATION

Genetic locus: HYOU1 (human) mapping to 11q23.3; Hyou1 (mouse) mapping to 9 A5.2.

## SOURCE

ORP150 (E-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ORP150 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-243687 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

ORP150 (E-16) is recommended for detection of ORP150 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ORP150 (E-16) is also recommended for detection of ORP150 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ORP150 siRNA (h): sc-96695, ORP150 siRNA (m): sc-151324, ORP150 shRNA Plasmid (h): sc-96695-SH, ORP150 shRNA Plasmid (m): sc-151324-SH, ORP150 shRNA (h) Lentiviral Particles: sc-96695-V and ORP150 shRNA (m) Lentiviral Particles: sc-151324-V.

Molecular Weight of ORP150: 150 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **ORP150 (A-3): sc-398224** or **ORP150 (38): sc-136555**, our highly recommended monoclonal alternatives to ORP150 (E-16).