

# OVCA1 (S-15): sc-54643

## BACKGROUND

OVCA1 (ovarian cancer-associated gene 1 protein) is a nuclear protein that belongs to the DPH1/DPH2 family (DPH1 subfamily). Diphthamide is a modified histidine amino acid that is created by a posttranslational modification of eukaryotic elongation factor 2 (EF-2). Diphthamide is the target for ADP-ribosylation by diphtheria toxin, which renders the elongation factor inactive. The diphthamide modification is conserved in all eukaryotes and archaeobacteria and is formed by the actions of five proteins, DPH1-5, and an amidating enzyme. OVCA1 (DPH1) is required for the first step in the synthesis of diphthamide. The chromosomal region that contains OVCA1, 17p13.3, is frequently deleted in human ovarian carcinoma, suggesting this 15 kb region of deletion may contain a tumor suppressor gene. OVCA1 acts as a tumor suppressor in lung and breast cancers and when overexpressed will suppress colony formation and growth rate of ovarian cancer cells. OVCA1 is expressed in heart, brain, placenta, lung, liver, skeletal muscle, kidney, pancreas, spleen, thymus, mammary gland, colon, small intestine, testis and ovary.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: DPH1 (human) mapping to 17p13.3; Dph1 (mouse) mapping to 11 B5.

## SOURCE

OVCA1 (S-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of OVCA1 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-54643 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

OVCA1 (S-15) is recommended for detection of OVCA1 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).

OVCA1 (S-15) is also recommended for detection of OVCA1 in additional species, including equine, bovine, porcine and avian.

Suitable for use as control antibody for OVCA1 siRNA (h): sc-62727, OVCA1 siRNA (m): sc-62728, OVCA1 shRNA Plasmid (h): sc-62727-SH, OVCA1 shRNA Plasmid (m): sc-62728-SH, OVCA1 shRNA (h) Lentiviral Particles: sc-62727-V and OVCA1 shRNA (m) Lentiviral Particles: sc-62728-V.

Molecular Weight of OVCA1: 49 kDa.

Positive Controls: Mouse ovary extract: sc-2404, rat ovary extract: sc-2399 or HeLa whole cell lysate: sc-2200

## 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.