

# pHyde (H-64): sc-292255

## BACKGROUND

Caspases modulate apoptosis in various ways. Specifically, Caspase-3, a death protease, is instrumental in cleaving cellular proteins, dismantling the cell and forming apoptotic bodies. pHyde has a potential role as a tumor suppressor by inducing caspase-3-mediated apoptosis and stimulating p53 expression. A dose-dependent increase in caspase-3 activity is observed in transduced pHyde DU145 cells. Furthermore, caspase-3 may be necessary for pHyde-mediated apoptosis. The pHyde gene may upregulate the apoptosis pathway and thus have a potential application in cancer gene therapy. Recombinant pHyde inhibits the growth of human prostate cancer cell lines DU145 and LNCaP *in vitro*. DU145 tumors may be reduced significantly *in vivo* when nude mice are injected with recombinant pHyde. pHyde also has a demonstrated growth inhibitory effect on human breast cancer cells. This suggests that pHyde may have a role in inhibiting different tumor types.

## REFERENCES

- Porter, A.G., et al. 1999. Emerging roles of caspase-3 in apoptosis. *Cell Death Differ.* 6: 99-104.
- Slee, E.A., et al. 1999. Serial killers: ordering caspase activation events in apoptosis. *Cell Death Differ.* 6: 1067-1074.
- Steiner, M.S., et al. 2000. Growth inhibition of prostate cancer by an adenovirus expressing a novel tumor suppressor gene, pHyde. *Cancer Res.* 60: 4419-4425.
- Rinaldy, A.R., et al. 2000. Role of pHyde novel gene product as an intrinsic factor for apoptotic pathway in prostate cancer. *Gan To Kagaku Ryoho* 2: 215-222.
- Zhang, X., et al. 2001. Apoptosis induction in prostate cancer cells by a novel gene product, pHyde, involves caspase-3. *Oncogene* 20: 5982-5990.
- Ohgami, R.S., et al. 2006. The Steap proteins are metalloreductases. *Blood* 108: 1388-1394.
- Knutson, M.D. 2007. Steap proteins: implications for iron and copper metabolism. *Nutr. Rev.* 65: 335-340.

## CHROMOSOMAL LOCATION

Genetic locus: STEAP3 (human) mapping to 2q14.2; Steap3 (mouse) mapping to 1 E2.3.

## SOURCE

pHyde (H-64) is a rabbit polyclonal antibody raised against amino acids 140-203 mapping within an internal region of pHyde 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.

## STORAGE

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

## APPLICATIONS

pHyde (H-64) is recommended for detection of pHyde of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

pHyde (H-64) is also recommended for detection of pHyde in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for pHyde siRNA (h): sc-37487, pHyde siRNA (m): sc-37488, pHyde shRNA Plasmid (h): sc-37487-SH, pHyde shRNA Plasmid (m): sc-37488-SH, pHyde shRNA (h) Lentiviral Particles: sc-37487-V and pHyde shRNA (m) Lentiviral Particles: sc-37488-V.

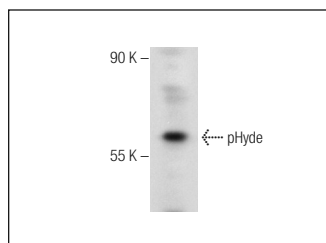
Molecular Weight of pHyde: 55 kDa.

Positive Controls: Hep G2 nuclear extract: sc-364819 or Human fetal liver tissue extract.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



pHyde (H-64): sc-292255. Western blot analysis of pHyde expression in Hep G2 nuclear extract.

## 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.