

## P4HA3 (V-14): sc-168880

### BACKGROUND

Prolyl 4-hydroxylase plays a key role in collagen synthesis. Composed of two identical  $\alpha$  subunits and two  $\beta$  subunits, prolyl 4-hydroxylase assists in the formation of 4-hydroxyproline, which ensures proper folding of newly synthesized procollagen chains. P4HA3 (prolyl 4-hydroxylase, alpha polypeptide III), also known as procollagen-proline,2-oxoglutarate-4-dioxygenase subunit  $\alpha$ -3, is a 544 amino acid protein that encodes an  $\alpha$  subunit of prolyl 4-hydroxylase. Localizing to the lumen of the endoplasmic reticulum, P4HA3 is highly expressed in liver, placenta and fetal skin, with lower levels of expression in skeletal muscle, lung, fibroblast and both fetal liver and epiphyseal cartilage. P4HA3 exists as two alternatively spliced isoforms, belongs to the P4HA family, contains one TPR repeat, a Fe2OG dioxygenase domain, and is encoded by a gene that maps to human chromosome 11q13.4.

### REFERENCES

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3. Kukkola, L., Hieta, R., Kivirikko, K.I. and Myllyharju, J. 2003. Identification and characterization of a third human, rat, and mouse collagen prolyl 4-hydroxylase isoenzyme. *J. Biol. Chem.* 278: 47685-47693.
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6. Myllyharju, J. 2008. Prolyl 4-hydroxylases, key enzymes in the synthesis of collagens and regulation of the response to hypoxia, and their roles as treatment targets. *Ann. Med.* 40: 402-417.
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### CHROMOSOMAL LOCATION

Genetic locus: P4HA3 (human) mapping to 11q13.4; P4ha3 (mouse) mapping to 7 E3.

### SOURCE

P4HA3 (V-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of P4HA3 of human origin.

### STORAGE

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

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-168880 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

P4HA3 (V-14) is recommended for detection of P4HA3 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); non cross-reactive with P4HA1 or P4HA2.

P4HA3 (V-14) is also recommended for detection of P4HA3 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for P4HA3 siRNA (h): sc-97000, P4HA3 siRNA (m): sc-151967, P4HA3 shRNA Plasmid (h): sc-97000-SH, P4HA3 shRNA Plasmid (m): sc-151967-SH, P4HA3 shRNA (h) Lentiviral Particles: sc-97000-V and P4HA3 shRNA (m) Lentiviral Particles: sc-151967-V.

Molecular Weight of P4HA3: 61 kDa.

### 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941.

### 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.