

P4HA1 (K-19): sc-243720

BACKGROUND

P4HA1 (prolyl 4-hydroxylase, α polypeptide I) and P4HA2 (prolyl 4-hydroxylase, α polypeptide II) are 534 and 535 amino acid proteins, respectively, that each localize to the lumen of the endoplasmic reticulum and contain one TPR repeat, as well as one PKHD domain. Using ascorbate and iron as cofactors, P4HA1 and P4HA2 catalyze the post-translational formation of 4-hydroxyproline in collagens and other proteins, thereby playing an essential role in the proper folding of newly synthesized peptides. P4HA1 exists as a heterotrimer of two α -1 and two β chains, while P4HA2 exists as a heterotrimer of two α -2 chains and two β chains. Both P4HA1 and P4HA2 exist as multiple alternatively spliced isoforms.

REFERENCES

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3. Kukkola, L., et al. 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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CHROMOSOMAL LOCATION

Genetic locus: P4HA1 (human) mapping to 10q22.1; P4ha1 (mouse) mapping to 10 B4.

SOURCE

P4HA1 (K-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of P4HA1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-243720 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

P4HA1 (K-19) is recommended for detection of P4HA1 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 P4HA2 or P4HA3.

P4HA1 (K-19) is also recommended for detection of P4HA1 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for P4HA1 siRNA (h): sc-90782, P4HA1 siRNA (m): sc-151965, P4HA1 shRNA Plasmid (h): sc-90782-SH, P4HA1 shRNA Plasmid (m): sc-151965-SH, P4HA1 shRNA (h) Lentiviral Particles: sc-90782-V and P4HA1 shRNA (m) Lentiviral Particles: sc-151965-V.

Molecular Weight of P4HA1: 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[™] 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 or our catalog for detailed protocols and support products.