

P5CRL (E-13): sc-98065

BACKGROUND

Proteins containing L-proline play an important role in protein folding, structure and stability. Additionally, the presence of L-proline in certain proteins may serve as a sequence-recognition motif. Proline functions as a non-enzymatic antioxidant to minimize damage caused by reactive oxygen species (ROS) in microorganisms, animals and plants. In the last step of proline biosynthesis, pyrroline-5-carboxylate reductase (P5CR) catalyzes the reduction of aldehyde dehydrogenase 4A1 (ALDH4A1) to proline using NAD(P)H as the cofactor. P5CRL (pyrroline-5-carboxylate reductase-like), also known as P5CR 3, P5C reductase 3 or PYCRL, is 274 amino acids in length, belongs to the pyrroline-5-carboxylate reductase family and functions as a homodecamer, which is composed of 5 homodimers. P5CR may play a critical role in proline bio-synthesis.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: PYCRL (human) mapping to 8q24.3; Pycrl (mouse) mapping to 15 D3.

SOURCE

P5CRL (E-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of P5CRL of human origin.

RESEARCH USE

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

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-98065 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

P5CRL (E-13) is recommended for detection of P5CRL 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).

P5CRL (E-13) is also recommended for detection of P5CRL in additional species, including equine.

Suitable for use as control antibody for P5CRL siRNA (h): sc-77825, P5CRL siRNA (m): sc-151972, P5CRL shRNA Plasmid (h): sc-77825-SH, P5CRL shRNA Plasmid (m): sc-151972-SH, P5CRL shRNA (h) Lentiviral Particles: sc-77825-V and P5CRL shRNA (m) Lentiviral Particles: sc-151972-V.

Molecular Weight of P5CRL: 29 kDa.

Positive Controls: 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.