

# P5CRL (E-63): sc-100487

## 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 homodimer, which is composed of five homodimers. P5CR may play a critical role in proline bio-synthesis.

## REFERENCES

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- Forlani, G., Occhipinti, A., Berlicki, L., Dziedzic, G., Wieczorek, A. and Kafarski, P. 2008. Tailoring the structure of aminobisphosphonates to target plant P5C reductase. *J. Agric. Food Chem.* 56: 3193-3199.

## CHROMOSOMAL LOCATION

Genetic locus: PYCRL (human) mapping to 8q24.3.

## SOURCE

P5CRL (E-63) is a mouse monoclonal antibody raised against recombinant P5CRL of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

P5CRL (E-63) is recommended for detection of P5CRL of 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).

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

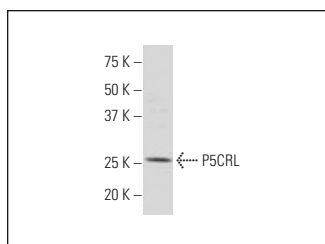
Molecular Weight of P5CRL: 29 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

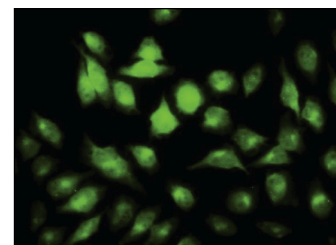
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



P5CRL (E-63): sc-100487. Western blot analysis of P5CRL expression in HeLa whole cell lysate.



P5CRL (E-63): sc-100487. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear and cytoplasmic localization.

## 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) for detailed protocols and support products.