

Homocitrate Synthase (31F5): sc-57832

BACKGROUND

Homocitrate Synthase (acetyl-coenzyme A:2-ketoglutarate C-transferase) is the first enzyme in the lysine biosynthetic pathway, a feedback loop regulated by L-lysine that is common to fungi and some bacteria. Homocitrate Synthase specifically catalyzes the condensation of AcCoA and α -ketoglutarate, yielding Homocitrate and CoA. As a metalloenzyme, Homocitrate Synthase contains zinc, advocating a chemical mechanism in which α -ketoglutarate initially binds to the active site Zn, through the use of its α -oxo and α -carboxylate groups, followed by acetyl-CoA. Homocitrate Synthase is expressed not only in the nucleus of the yeast *Saccharomyces cerevisiae*, but also in the cytoplasm and mitochondria of *Penicillium chrysogenum*. This difference in localization suggests that Homocitrate Synthase, in addition to its catalytic function, also performs a regulatory function.

REFERENCES

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SOURCE

Homocitrate Synthase (31F5) is a mouse monoclonal antibody raised against nuclear protein preparations of yeast origin.

PRODUCT

Each vial contains 500 μ l culture supernatant containing IgG₁ in PBS with < 0.1% sodium azide.

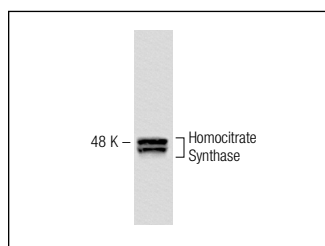
APPLICATIONS

Homocitrate Synthase (31F5) is recommended for detection of two Homocitrate Synthase isozymes, Lys20p and Lys21p of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:5000), immunoprecipitation [10-20 μ l per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution to be determined by researcher, dilution range 1:50-1:2500).

Molecular Weight of Homocitrate Synthase: 47 kDa.

Positive Controls: yeast cell extract.

DATA



Homocitrate Synthase (31F5): sc-57832. Western blot analysis of Homocitrate Synthase expression in yeast cell extract.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

RESEARCH USE

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

PROTOCOLS

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