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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
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PDK2 (h): 293T Lysate: sc-158837

BACKGROUND

Pyruvate dehydrogenase kinase family members (PDK1, 2, 3 and 4) are serine kinases that catalyze phosphorylation of the E1 α subunit of the pyruvate dehydrogenase complex (PDC). PDC activity is controlled through phosphorylation and dephosphorylation of the E1 α subunit, which leads to inactivation and reactivation, respectively. The core of PDC is composed of sixty dihydro-lipoyl acetyltransferase (E2) subunits that bind directly to PDK2 and enhance PDK2 kinase activity. Upregulation of PDK isoenzymes occurs during starvation conditions, rerouting acetyl-CoA generation by facilitating fatty acid oxidation. PDKs contain five conserved regions and are mechanistically similar to bacterial His-kinases, in that both require histidine residues for activity. In mammals, transcripts for PDK2 are ubiquitously expressed with high levels in heart and skeletal muscle and decreased levels in spleen and lung.

REFERENCES

1. Gudi, R., et al. 1995. Diversity of the pyruvate dehydrogenase kinase gene family in humans. *J. Biol. Chem.* 270: 28989-28994.
2. Bowker-Kinley, M.M., et al. 1998. Evidence for existence of tissue-specific regulation of the mammalian pyruvate dehydrogenase complex. *Biochem. J.* 329: 191-196.
3. Sugden, M.C., et al. 2000. Selective modification of the pyruvate dehydrogenase kinase isoform profile in skeletal muscle in hyperthyroidism: implications for the regulatory impact of glucose on fatty acid oxidation. *J. Endocrinol.* 167: 339-345.
4. Mooney, B.P., et al. 2000. Histidine modifying agents abolish pyruvate dehydrogenase kinase activity. *Biochem. Biophys. Res. Commun.* 267: 500-503.
5. Baker, J.C., et al. 2000. Marked differences between two isoforms of human pyruvate dehydrogenase kinase. *J. Biol. Chem.* 275: 15773-15781.
6. Wu, P., et al. 2000. Starvation increases the amount of pyruvate dehydrogenase kinase in several mammalian tissues. *Arch. Biochem. Biophys.* 381: 1-7.

CHROMOSOMAL LOCATION

Genetic locus: PDK2 (human) mapping to 17q21.33.

PRODUCT

PDK2 (h): 293T Lysate represents a lysate of human PDK2 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

PDK2 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive PDK2 antibodies. Recommended use: 10-20 μ l per lane.

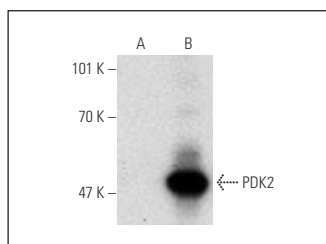
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

PDK2 (S-15): sc-100534 is recommended as a positive control antibody for Western Blot analysis of enhanced human PDK2 expression in PDK2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

DATA



PDK2 (S-15): sc-100534. Western blot analysis of PDK2 expression in non-transfected: sc-117752 (A) and human PDK2 transfected: sc-158837 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.