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Lieferung & Zahlungsart

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- Mindermengenzuschlag
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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

SANTA CRUZ BIOTECHNOLOGY, INC.

CYB5R3 (m): 293T Lysate: sc-119542

BACKGROUND

CYB5R3 (NADH-cytochrome b_5 reductase 3, diaphorase-1) is a 301 amino acid protein encoded by the human gene CYB5R3. CYB5R3 belongs to the flavoprotein pyridine nucleotide cytochrome reductase family and has two naturally occuring isoforms. Isoform 1 is anchored to the cytoplasmic side of the endoplasmic reticulum membrane and mitochondrion outer membrane, while isoform 2 is the soluble form found in erythrocytes. CYB5R3 is involved in the desaturation and elongation of fatty acids, cholesterol biosynthesis, drug metabolism and, in erythrocytes, methemoglobin reduction. A serine residue at position 117 seems to only be found in persons of African origin. The allele frequency is 0.23 in African Americans. It is not found in Caucasians, Asians, Indo-Aryans or Arabs. This difference seems to have no effect on the enzyme activity. Defects in CYB5R3 are the cause of hereditary methemoglobinemia (HM). There are three forms of this disease: type 1 (HM1), in which the enzyme is only deficient in erythrocytes with a mild cyanosis; type 2 (HM2), in which the enzyme is completely deficient; and type 3 (HM3), where the deficiency is seen in all blood cells. Type 2 is a severe form accompanied by mental retardation and neurological impairment.

REFERENCES

1. Farahani, P., Chiu, S., Bowlus, C.L., Boffelli, D., Lee, E., Fisler, J.S., Krauss, R.M. and Warden, C.H. 2004. Obesity in BSB mice is correlated with expression of genes for iron homeostasis and leptin. Obes. Res. 12: 191-204.
2. Percy, M.J., Crowley, L.J., Davis, C.A., McMullin, M.F., Savage, G., Hughes, J., McMahon, C., Quinn, R.J., Smith, O., Barber, M.J. and Lappin, T.R. 2005. Recessive congenital methaemoglobinaemia: functional characterization of the novel D239G mutation in the NADH-binding lobe of cytochrome b_5 reductase. Br. J. Haematol. 129: 847-853.
3. Roma, G.W., Crowley, L.J., Davis, C.A. and Barber, M.J. 2005. Mutagenesis of Glycine 179 modulates both catalytic efficiency and reduced pyridine nucleotide specificity in cytochrome b_5 reductase. Biochemistry 44: 13467-13476.
4. Tonegawa, Y., Umeda, N., Hayakawa, T. and Ishibashi, T. 2005. Evaluation of data in terms of two-dimensional random walk model: interaction between NADH-cytochrome b_5 reductase and cytochrome b_5. Biomed. Res. 26: 207-212.
5. Roma, G.W., Crowley, L.J. and Barber, M.J. 2006. Expression and characterization of a functional canine variant of cytochrome b_5 reductase. Arch. Biochem. Biophys. 452: 69-82.
6. Percy, M.J., Crowley, L.J., Boudreaux, J. and Barber, M.J. 2006. Expression of a novel P275L variant of NADH:cytochrome b_5 reductase gives functional insight into the conserved motif important for pyridine nucleotide binding. Arch. Biochem. Biophys. 447: 59-67.

CHROMOSOMAL LOCATION

Genetic locus: Cyb5r3 (mouse) mapping to 15 E1.

PRODUCT

CYB5R3 (m): 293T Lysate represents a lysate of mouse CYB5R3 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

CYB5R3 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive CYB5R3 antibodies. Recommended use: 10-20 µl per lane.

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

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.