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Lieferung & Zahlungsart

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- Mindermengenzuschlag
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SANTA CRUZ BIOTECHNOLOGY, INC.

Hephaestin (h2): 293T Lysate: sc-171063

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

Hephaestin is a single-pass type I membrane protein that belongs to the multi-copper oxidase family of proteins. Hephaestin, a copper-dependant ferroxidase protein, is crucial for iron exiting intestinal enterocytes into the circulation. It mediates the movement of iron across the basolateral membrane in conjunction with ferroportin 1. This is an important link between iron and copper metabolism in mammalian systems, as copper deficiency leads to reduced Hephaestin and reduced iron absorption resulting in anemia. Hephaestin can bind six copper ions per monomer and is regulated by the homeobox transcription factor Cdx2. Increased levels of iron leads to an increase in Cdx2 expression and thus Hephaestin. Hephaestin is primarily detected in the intestine, but is also expressed in colon, breast, bone trabecural cells and fibroblasts.

REFERENCES

1. Anderson, G.J., et al. 2005. Recent advances in intestinal iron transport. Curr. Gastroenterol. Rep. 7: 365-372.
2. Anderson, G.J., et al. 2005. Mechanisms of haem and non-haem iron absorption: lessons from inherited disorders of iron metabolism. Biometals 18: 339-348.
3. Petrak, J., et al. 2005. Hephaestin—a ferroxidase of cellular iron export. Int. J. Biochem. Cell Biol. 37: 1173-1178.
4. Gleeson, F., et al. 2005. Duodenal Dcytb and Hephaestin mRNA expression are not significantly modulated by variations in body iron homeostasis. Blood Cells Mol. Dis. 35: 303-308.
5. Reeves, P.G., et al. 2005. Repletion of copper-deficient rats with dietary copper restores duodenal Hephaestin protein and iron absorption. Exp. Biol. Med. 230: 320-325.
6. Hinoi, T., et al. 2005. Cdx2-regulated expression of iron transport protein Hephaestin in intestinal and colonic epithelium. Gastroenterology 128: 946-961.
7. Reeves, P.G., et al. 2005. Dietary copper deficiency reduces iron absorption and duodenal enterocyte Hephaestin protein in male and female rats. J. Nutr. 135: 92-98.

CHROMOSOMAL LOCATION

Genetic locus: HEPH (human) mapping to Xq12.

PRODUCT

Hephaestin (h2): 293T Lysate represents a lysate of human Hephaestin transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

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.

PROTOCOLS

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

APPLICATIONS

Hephaestin (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive Hephaestin 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.

RESEARCH USE

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