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DDT (h4): 293T Lysate: sc-170664

BACKGROUND

Macrophage migration inhibitory factor, known as MIF or glycosylation-inhibiting factor, is a secreted, homotrimeric, pro-inflammatory cytokine that modulates macrophage and T cell function and is an important regulator of host response to infection. MIF is expressed at sites of inflammation, which suggests that it plays a role in regulating macrophage function in host defense. The only known family member of MIF is D-dopachrome tautomerase (DDT), a protein that is thought to similarly play a role in the inflammation process. DDT is highly expressed in liver with lower levels in other organs, including heart, lung and pancreas. It resides in the cytoplasm as a homotrimer and converts 2-carboxy-2,3-dihydroindole-5, 6-quinone (D-dopachrome) into 5,6-dihydroxyindole. DDT requires the presence of an N-terminal proline residue for catalytic activity and is involved in the biosynthesis of melanin, an antioxidant. In response to liver damage, DDT has been shown to increase protein levels in order to accelerate melanin biosynthesis and protect the liver from oxidative stress.

REFERENCES

1. Weiser, W.Y., Temple, P.A., Witek-Giannotti, J.S., Remold, H.G., Clark, S.C. and David, J.R. 1989. Molecular cloning of a cDNA encoding a human macrophage migration inhibitory factor. *Proc. Natl. Acad. Sci. USA* 86: 7522-7526.
2. Paralkar, V. and Wistow G. 1994. Cloning the human gene for macrophage migration inhibitory factor (MIF). *Genomics* 19: 48-51.
3. Bernhagen, J., Mitchell, R.A., Calandra, T., Voelter, W., Cerami, A. and Bucala, R. 1994. Purification, bioactivity, and secondary structure analysis of mouse and human macrophage migration inhibitory factor (MIF). *Biochemistry* 33: 14144-14155.
4. Yoshida, H., Nishihira, J., Suzuki, M. and Hikichi, K. 1997. NMR characterization of physicochemical properties of rat D-dopachrome tautomerase. *Biochem. Mol. Biol. Int.* 42: 891-899.
5. Nishihira, J., Fujinaga, M., Kuriyama, T., Suzuki, M., Sugimoto, H., Nakagawa, A., Tanaka, I. and Sakai, M. 1998. Molecular cloning of human D-dopachrome tautomerase cDNA: N-terminal proline is essential for enzyme activation. *Biochem. Biophys. Res. Commun.* 243: 538-544.
6. Sugimoto, H., Taniguchi, M., Nakagawa, A., Tanaka, I., Suzuki, M. and Nishihira, J. 1999. Crystal structure of human D-dopachrome tautomerase, a homologue of macrophage migration inhibitory factor, at 1.54 Å resolution. *Biochemistry* 38: 3268-3279.
7. Sonesson, B., Rosengren, E., Hansson, A.S. and Hansson, C. 2003. UVB-induced inflammation gives increased D-dopachrome tautomerase activity in blister fluid which correlates with macrophage migration inhibitory factor. *Exp. Dermatol.* 12: 278-282.
8. Hiyoshi, M., Konishi, H., Uemura, H., Matsuzaki, H., Tsukamoto, H., Sugimoto, R., Takeda, H., Dakeshita, S., Kitayama, A., Takami, H., Sawachika, F., Kido, H. and Arisawa, K. 2009. D-dopachrome tautomerase is a candidate for key proteins to protect the rat liver damaged by carbon tetrachloride. *Toxicology* 255: 6-14.

CHROMOSOMAL LOCATION

Genetic locus: DDT (human) mapping to 22q11.23.

PRODUCT

DDT (h4): 293T Lysate represents a lysate of human DDT transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

DDT (h4): 293T Lysate is suitable as a Western Blotting positive control for human reactive DDT 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.