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β-casein (m3): 293T Lysate: sc-119010

BACKGROUND

Milk proteins are crucial for the development of all newborn mammals and caseins constitute the major proteins in mammalian milk. β- and κ-caseins are the only caseins present in human milk. The β-casein/κ-casein ratio is higher in colostrum than in transitional and mature milk and is related to a better digestibility of colostrum casein micelles by the neonate during the first days of life. Human β-casein-encoding gene (Bca) contains a highly phosphorylated site, which is responsible for the calcium-binding capacity of β-casein. A common set of transcription factors are required for the expression of β-casein. Multiple binding sites for Stat5, C/EBPβ (CCAAT/enhancer-binding protein) and several half-sites for glucocorticoid receptor (GR) are identified in the distal human enhancer of the β-casein gene. β-casein gene transcription is regulated primarily by a composite response element (CoRE), which integrates signaling from the lactogenic hormones PRL, Insulin and hydrocortisone in mammary epithelial cells. NFκB functions as a negative regulator of β-casein gene expression during pregnancy by interfering with Stat5 tyrosine phosphorylation.

REFERENCES

- Greenberg, R., Groves, M.L. and Dower, H.J. 1984. Human β-casein. Amino acid sequence and identification of phosphorylation sites. *J. Biol. Chem.* 259: 5132-5138.
- Lonnerdal, B., Bergstrom, S., Andersson, Y., Hjalmarsson, K., Sundqvist, A.K. and Hernell, O. 1990. Cloning and sequencing of a cDNA encoding human milk β-casein. *FEBS Lett.* 269: 153-156.
- Menon, R.S., Chang, Y.F., Jeffers, K.F., Jones, C. and Ham, R.G. 1992. Regional localization of human β-casein gene (CSN2) to 4pter-q21. *Genomics* 13: 25-26.
- Hansson, L., Edlund, A., Johansson, T., Hernell, O., Stromqvist, M., Lindquist, S., Lonnerdal, B. and Bergstrom, S. 1994. Structure of the human β-casein encoding gene. *Gene* 139: 193-199.
- Winklehner-Jennewein, P., Geymayer, S., Lechner, J., Welte, T., Hansson, L., Geley, S. and Doppler, W. 1998. A distal enhancer region in the human β-casein gene mediates the response to prolactin and glucocorticoid hormones. *Gene* 217: 127-139.
- Cuilliere, M.L., Tregoa, V., Bene, M.C., Faure, G. and Montagne, P. 1999. Changes in the κ-casein and β-casein concentrations in human milk during lactation. *J. Clin. Lab. Anal.* 13: 213-218.
- Lykos, M.A., Fligger, J.M., Staley, M.D. and Baumrucker, C.R. 2000. Auto-crine Insulin-like growth factor II inhibits β-casein mRNA expression in a mammary cell line. *J. Dairy Sci.* 83: 285-295.
- Wyszomierski, S.L. and Rosen, J.M. 2001. Cooperative effects of Stat5 (signal transducer and activator of transcription 5) and C/EBPβ (CCAAT/enhancer-binding protein-β) on β-casein gene transcription are mediated by the glucocorticoid receptor. *Mol. Endocrinol.* 15: 228-240.

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.

CHROMOSOMAL LOCATION

Genetic locus: Csn2 (mouse) mapping to 5 E1.

PRODUCT

β-casein (m3): 293T Lysate represents a lysate of mouse β-casein transfected 293T cells and is provided as 100 μg protein in 200 μl SDS-PAGE buffer.

APPLICATIONS

β-casein (m3): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive β-casein 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.

PROTOCOLS

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