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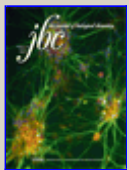
JOURNAL ARTICLE

Alternative splicing of CREB and CREM mRNAs in an immortalized germ cell line

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Alternative splicing of CREB (cAMP response element binding protein) and CREM (cAMP response element modulator) mRNAs in separated pachytene spermatocyte, round spermatid, and elongated spermatid fractions and the germ cell-derived immortalized cell line GC-2spd(ts) was studied by reverse transcription polymerase chain reaction (RT-PCR). Both primary germ cells and the GC-2spd(ts) cell line expressed the testis-specific CREB splice variant containing exon W. In the CREB C-E exon region, both primary germ cells and GC-2spd(ts) cells produced RT-PCR products that included exon Y. RT-PCR using CREM primers produced multiple bands in primary germ cells. The truncated CREM delta C-G form was found in all the germ cell fractions. The smaller splice forms of CREM were more prominent in the GC-2spd(ts) cells. GC-2spd(ts) cells resembled F9 teratocarcinoma cells more closely than primary germ cells with respect to the relative expression of both CREB and CREM alternative splice products. In Sertoli cells, RT-PCR products of CREB exon lacking W and the product corresponding to CREM delta C-G were most prominent. These data show that the GC-2spd(ts) cell line retains some qualitative characteristics of primary germ cells with respect to alternative splicing of CREB and CREM mRNA.

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J. Biol. Chem., October 14, 2005; 280(41): 34521 - 34529.

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J. Mol. Endocrinol., February 1, 2005; 34(1): 1 - 17.

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J. Bailey, R. J. Phillips, A. J. Pollard, K. Gilmore, S. C. Robson, and G. N. Europe-Finner

Characterization and Functional Analysis of cAMP Response Element Modulator Protein and Activating Transcription Factor 2 (ATF2) Isoforms in the Human Myometrium during Pregnancy and Labor: Identification of a Novel ATF2 Species with Potent Transactivation Properties

J. Clin. Endocrinol. Metab., April 1, 2002; 87(4): 1717 - 1728.

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Biol Reprod, November 1, 2000; 63(5): 1555 - 1561.

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Expression of the cyclic AMP-dependent transcription factors, CREB, CREM and ATF2, in the human myometrium during pregnancy and labour

Mol. Hum. Reprod., July 1, 2000; 6(7): 648 - 660.

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