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## JOURNAL ARTICLE

# Characterization of a novel transcript of 14-3-3 theta in Sertoli cells

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The isoforms of the highly conserved and ubiquitously expressed 14-3-3 family of proteins function primarily as adapters that modulate interactions between components of various cellular signaling and cell cycle regulatory pathways. Low levels of 14-3-3 isoforms appear to be expressed in most tissues, but specific isoforms or combinations have been shown to be overexpressed in a cell-specific manner. In the present study we show that the theta isoform of 14-3-3 is expressed in Sertoli cells. Although previous reports have shown the presence of a 14-3-3 theta isoform in mouse testicular germ cells, this report demonstrates the presence of the 14-3-3 theta isoform in rat Sertoli cells. The 14-3-3 theta isoform isolated from rat Sertoli cells appears to have a truncated 3' UTR, which makes the transcript shorter by 244 bp, compared with its brain counterpart. Northern blot analysis suggests that the 14-3-3 theta isoform may also be present in other testicular cell types and tissues. The truncation of the 3' UTR suggests a potential role in regulating cell-specific expression of 14-3-3 theta. The expression of 14-3-3 theta in Sertoli cells was confirmed by Northern blot, polymerase chain reaction, Western blot, and immunocytochemical analysis. The levels of 14-3-3 theta mRNA and protein in Sertoli cells remained unchanged in response to the gonadotropin, FSH. Consistent with the absence of the effect of FSH on the expression of 14-3-3 theta, an antisense oligonucleotide to 14-3-3 theta had no effect on FSH-induced activation of the transferrin promoter in Sertoli cells. The widespread expression of 14-3-3 theta in testis and the lack of effect of FSH on levels of its expression suggest that 14-3-3 theta influences Sertoli cell function in an FSH-independent manner.

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