



Transcriptional activity of an ovarian-specific promoter from rat in dairy goat granulosa cells

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Genet. Mol. Res. 12 (1): 127-135 (2013)

Received May 29, 2012

Accepted October 10, 2012

Published January 24, 2013

DOI <http://dx.doi.org/10.4238/2013.January.24.4>

ABSTRACT. Ovarian-specific promoter 1 (OSP-1) is a retrovirus-like element isolated from the complementary DNA library of rat that has been thought to be specifically expressed in ovary. To exploit this promoter in dairy goat ovary granulosa cells (GCs), OSP-1 from rat was used to construct the reporter vector pOSP-1-EGFP, in which *egfp* coding for enhanced green fluorescent protein (EGFP) was used as a reporter to examine the activity of OSP-1 in GCs. EGFP was successfully expressed in dairy goat GCs transfected with pOSP-1-EGFP. Reverse transcriptase-polymerase chain reaction analysis confirmed the tissue-specific transcription of EGFP messenger RNA in dairy goat GCs transfected with pOSP-1-EGFP. We concluded that OSP-1 promoter from rat can specifically drive foreign gene expression in dairy goat GCs. Thus, we obtained a tissue-specific regulation element and provided a potential tool for the research of regulation and development of the ovary in dairy goats.

Key words: OSP-1; Enhanced green fluorescent protein;
Dairy goat granulosa cells; Reverse transcription-polymerase chain reaction;
Tissue-specific expression