



Parathyroid hormone-related peptide (PTHrP): prokaryotic expression, purification, and preparation of a polyclonal antibody

H.L. Zheng, H. Li, Y.S. Sun, Z.Y. Yang and Q. Yu

Key Laboratory of Molecular Biology for Agriculture,
College of Animal Science and Technology,
Northwest Agriculture and Forestry University, Yangling,
Shaanxi Province, China

Corresponding author: H.L. Zheng
E-mail: zhenghuiling@nwsuaf.edu.cn

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ABSTRACT. Parathyroid hormone-related peptide (PTHrP) plays important roles in promoting cancer occurrence and in the development of bone metastases. To increase our knowledge of the biological functions of PTHrP, the prokaryotic expression vector pET-PTHrP was successfully constructed and the His-PTHrP fusion protein was expressed in *Escherichia coli*. Anti-PTHrP polyclonal antibody was then prepared from rabbits. Finally, the goat tissue expression profile of PTHrP was analyzed by Western blot with the anti-PTHrP polyclonal antibody. The results showed that the expression of PTHrP in goat mammary glands was significantly higher than that in other organs. This indicates that PTHrP may play important roles in the goat mammary gland. The antibody prepared will be a useful tool for detecting PTHrP and will be valuable in future studies investigating the role of PTHrP in calcium metabolism in the goat model.

Key words: Goats; Parathyroid hormone-related peptide;
Polyclonal antibody; Prokaryotic expression; Tissue expression profile