



Isolation and identification of bovine primary hepatocytes

Q.D. Jiang¹, H.P. Li², F.J. Liu², X.J. Wang², Y.J. Guo², L.F. Wang²,
W.F. Lu², H.J. Li², X.P. Li¹ and G.Y. Yang²

¹College of Veterinary Medicine, Northwest A&F University, Yangling,
Shanxi, China

²Key Laboratory of Animal Biochemistry and Nutrition, Ministry of Agriculture,
Henan Agricultural University, Zhengzhou, Henan, China

Corresponding authors: X.P. Li / G.Y. Yang
E-mail: jiangqd2000@126.com

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ABSTRACT. The liver is a unique organ that is endowed with a plethora of specialized functions. Most of its functional traits are controlled by hepatocytes. Primary hepatocytes have been used widely in *in vitro* models to understand the biological processes occurring in the liver. There are a number of methods used to separate hepatocytes, but the cell activity and purity are much lower in this condition. On the basis of previous research, in this study, the two-step collagenase perfusion technique was used for isolating hepatocytes. The key proteins of hepatocytes, cytokeratin-18 (CK-18) and albumin (ALB), were used to identify cells, and their contents were evaluated by immunohistochemistry and Western blotting. The results showed that the isolated hepatocytes comprised more than 96% of the corresponding protein volume stability. Therefore, this method was demonstrated to be reliable for identifying hepatocytes.

Key words: Bovine; Primary hepatocyte; Isolation; Identification; Culture