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Brain lipid binding protein (BLBP) regulates the proliferation of astrocytes *in vitro*

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The aim of the study is to explore the function of brain lipid binding protein in the proliferation of rats' astrocytes *in vitro.* The *BLBP* overexpressed adenovirus or small interference RNA (siRNA) was used to transfect into astrocytes. 3 days later, the gene and protein expression of *BLBP* was detected, the proportion of Ki67 and EdU positive cells was measured and the cell cycle was investigated by flow cytometry methods. After treatment of *BLBP* adenovirus, the expression of *BLBP* gene was elevated, the exogenous expression of *BLBP* could be expressed in astrocytes, the proportion of Ki67 and EdU positive cells was also increased, as well as the proportion of cells at S phase. After treatment of *BLBP* siRNA, the expression of *BLBP* gene was decreased, the proportion of Ki67 and the cells at S phase was reduced as well. In conclusion, besides as a fatty acids transporter, *BLBP* also regulates the proliferation of astrocytes *in vitro*.

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