

Proteome analysis according to the chondrogenic differentiation steps by pellet cultured rabbit bone marrow-derived mesenchymal stem cells

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Abstract

Under appropriate inducing conditions, bone marrow stem cells have the ability to differentiate into chondrocyte in vitro. During the chondrogenesis, the change of proteome in the cell was occurred. To induce the rabbit bone marrow-derived mesenchymal stem cell into chondrocyte, it was cultured by pellet culture with a chemically defined medium and was harvested 1, 7, 14 and 21 days after beginning of culture. RT-PCR was experimented to see whether it proceeded to chondrogenesis. And two dimensional electrophoresis carried out in order to compare the proteome each step. Detection of type II collagen mRNA proved the chondrogenesis. Up or down regulated proteins during the chondrogenesis by pellet culture were identified.

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References

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