Curcumin induces glioma stem-like cell formation.
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Abstract
In recent times, dozens of articles have been rushing to report the excellent performance of curcumin in inhibiting the proliferation of glioma cells and in inducing apoptosis and autophagy. However, in this study, we found that curcumin could not only effectively inhibit the proliferation of glioma cells but also induce glioma cells to be stem-like, which showed that it caused some glioma cells to form spheres with CD133 and Nestin positive markers. Further research on its underlying mechanism showed that curcumin suppressed transition of the cells from G1 to S phase and enhanced the expression of Sox4, Sox2, and Oct4, which were essential to retain the stemness properties of glioma-initiating cells. In conclusion, we believe these findings can complement our knowledge on curcumin and arouse our attention to use curcumin for further research on glioma treatment.

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