



**Article**

## **Tumor stem cells derived from glioblastomas cultured in bFGF and EGF more closely mirror the phenotype and genotype of primary tumors than do serum-cultured cell lines**

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### **Summary**

The concept of tumor stem cells (TSCs) provides a new paradigm for understanding tumor biology, although it remains unclear whether TSCs will prove to be a more robust model than traditional cancer cell lines. We demonstrate marked phenotypic and genotypic differences between primary human tumor-derived TSCs and their matched glioma cell lines. Unlike the matched, traditionally grown tumor cell lines, TSCs derived directly from primary glioblastomas harbor extensive similarities to normal neural stem cells and recapitulate the genotype, gene expression patterns, and in vivo biology of human glioblastomas. These findings suggest that TSCs may be a more reliable model than many commonly utilized cancer cell lines for understanding the biology of primary human tumors.

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