

Expression of Multidrug Resistance Genes in Normal and Cancer Stem Cells




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Abstract

CD133 (stem marker) and drug resistant gene (*mdr1* and *bcl-2*) expression were detected in human glioblastoma and normal brain tissues. Glioma tissues contained higher ratio of CD133+ cells compared to normal tissues (\approx 10 fold increase). The chemosensitivity assay showed that GOS-3 and NHA CD133+ possess greater resistance towards drugs compared to CD133- fractions. This study revealed for the first time that: a) serum deprivation enriched CD133 expression and demonstrated a direct co-expression between CD133 and drug resistant in GOS-3 cells and b) higher expression of CD133 and drug resistance were found in glioblastoma tissues in comparison to normal brain tissues.

Keywords: Cancer stem cells (CSCs); CD133; Drug resistance; gliomas; Serum free