1. The binding of lncRNA RP11-732M18.3 with 14-3-3β/α accelerates p21 degradation and promotes glioma growth

期刊年卷：EBioMedicine. 2019 Jun 12. pii: S2352-3964(19)30377-9.
DOI: 10.1016/j.ebiom
IF2018 = 6.68

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文章简介

胶质瘤（glioblastoma）是最常见的脑部肿瘤，既往有文献报道长链非编码RNA（long noncoding RNA，lncRNA）可通过调控下游蛋白调节胶质瘤细胞增殖及分化。王前教授团队发现体内胶质瘤细胞中 lncRNA RP11-732M18.3 高表达，并通过体内外实验证实 lncRNA RP11-732M18.3 可通过招募 UBE2E1 蛋白结合 14-3-3β/α 影响后者泛素化从而下调 p21 蛋白的表达，最终促进胶质瘤细胞增殖，该成果将发表在《EBioMedicine》杂志。该研究通过收集胶质瘤患者肿瘤组织及癌旁组织进行基因芯片检测，通过生信分析及体内外实验为我们揭示了 lncRNA RP11-732M18.3 与胶质瘤细胞增殖的关系。LncRNA 及相关通路机制可能为研究胶质瘤发病机制、寻找胶质瘤诊断及疾病动态检测生物标志物提供了新的思路和方法。

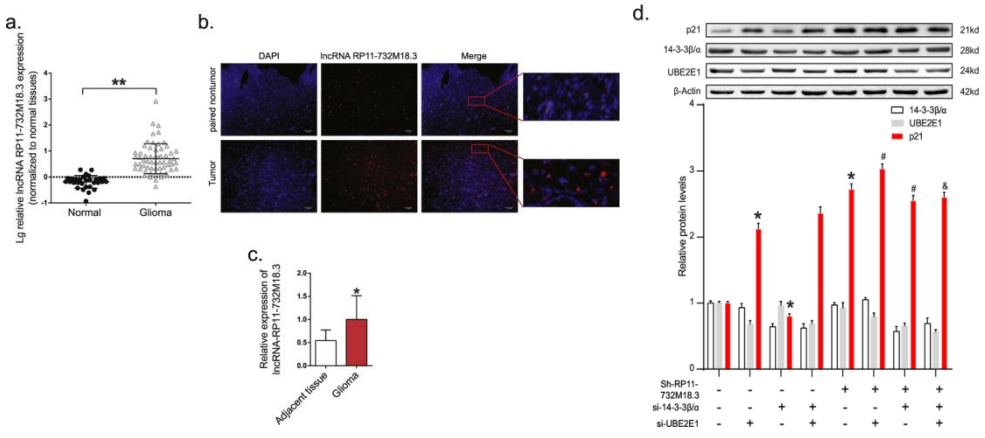

Fig. lncRNA-RP11-732M18.3 overexpression in glioma tissues. (a) lncRNA-RP11-732M18.3 expression in glioma samples and normal tissues was analyzed by qRT-PCR. The log10 transformation was applied to the expression levels, which were normalized to that of U6 (**p<.01,Student'st-test).(b)Representative images of lncRNA-RP11-732M18.3 expression from paired non-tumor and tumor tissues by

RNA FISH. All experiments were performed in triplicate(n=6).(c) Quantification of immunofluorescence RNA FISH. Data are presented as the mean ± standard deviation(SD) (n=6,*p<.05,Student'st-test). (d)lncRNA-RP11-732M18.3 promoted the recruitment of UBE2E1 to 14-3-3β/α. Western blot analysis of p21 in U87MG cells following the indicated treatment. Si=small interfering RNAs. The results are expressed as the mean ± SD. All experiments were performed in triplicate (n=3, *p<.05, One-Way ANOVA) vs. the first group, #p<.05 vs. the fifth group, and &p<.05 vs. the seventh group.