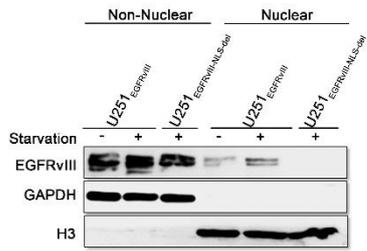
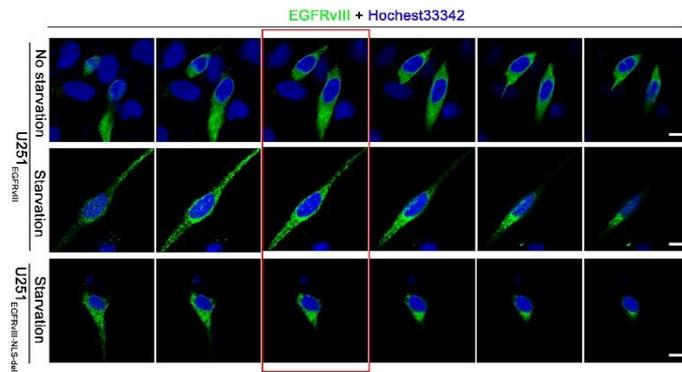


A



B

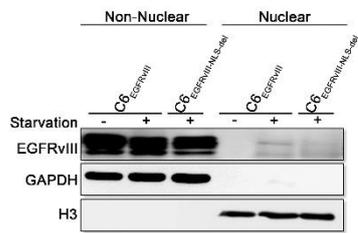


### S1: EGFRvIII's nuclear translocation was observed in U251<sup>EGFRvIII</sup>

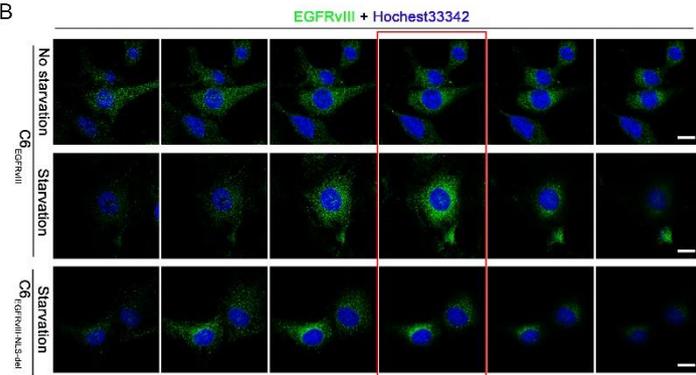
A: Comparison of EGFRvIII's and EGFRvIII-NLS-del's nuclear translocation by immunoblot analysis in U251<sup>EGFRvIII</sup> and U251<sup>EGFRvIII-NLS-del</sup>. Non-nucleus and nucleus were separated after 24h serum-free starvation culture and then immunoblot test was carried out. Histone H3 was used as nuclear marker.

B: Sequential sections of the nucleus in U251<sup>EGFRvIII</sup> and U251<sup>EGFRvIII-NLS-del</sup> by Confocal imaging. Every section is 0.2 $\mu$ m. The red line represents the largest dimension of the nucleus.

A



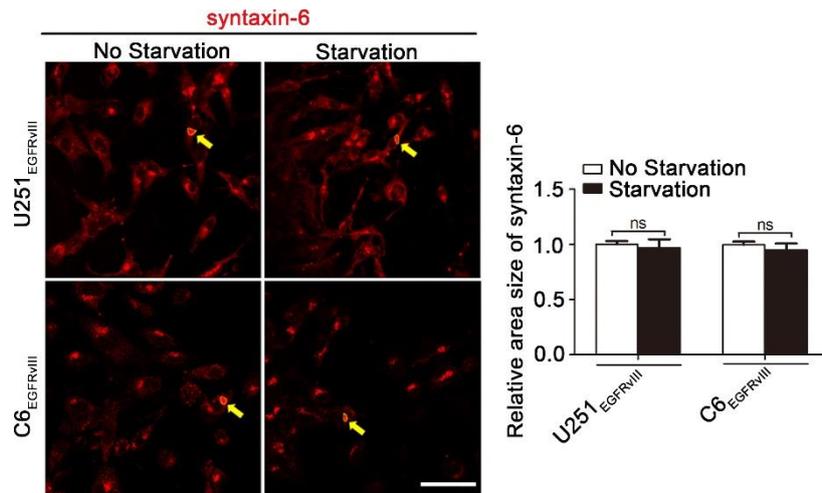
B



## S2: EGFRvIII's nuclear translocation was observed in C6<sup>EGFRvIII</sup>

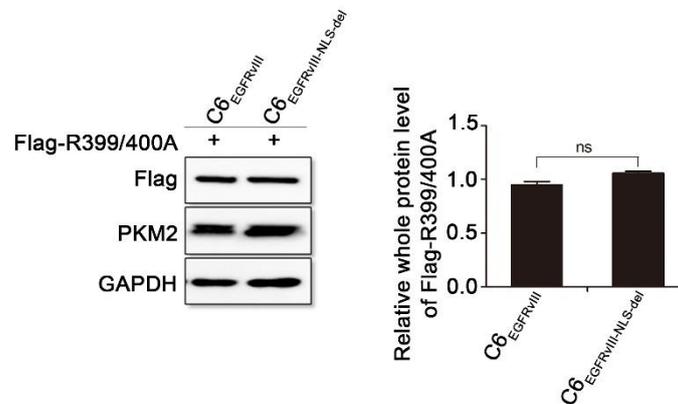
A: Comparison of EGFRvIII's nuclear translocation by immunoblot analysis in C6<sup>EGFRvIII</sup> and C6<sup>EGFRvIII-NLS-del</sup>. Non-nucleus and nucleus were separated after 24h serum-free starvation culture and then immunoblot test was carried out. Histone H3 was used as nuclear marker.

B: Sequential sections of the nucleus in C6<sup>EGFRvIII</sup> and C6<sup>EGFRvIII-NLS-del</sup> by Confocal imaging. Every section is 0.2 $\mu$ m. The red line represents the largest dimension of the nucleus.

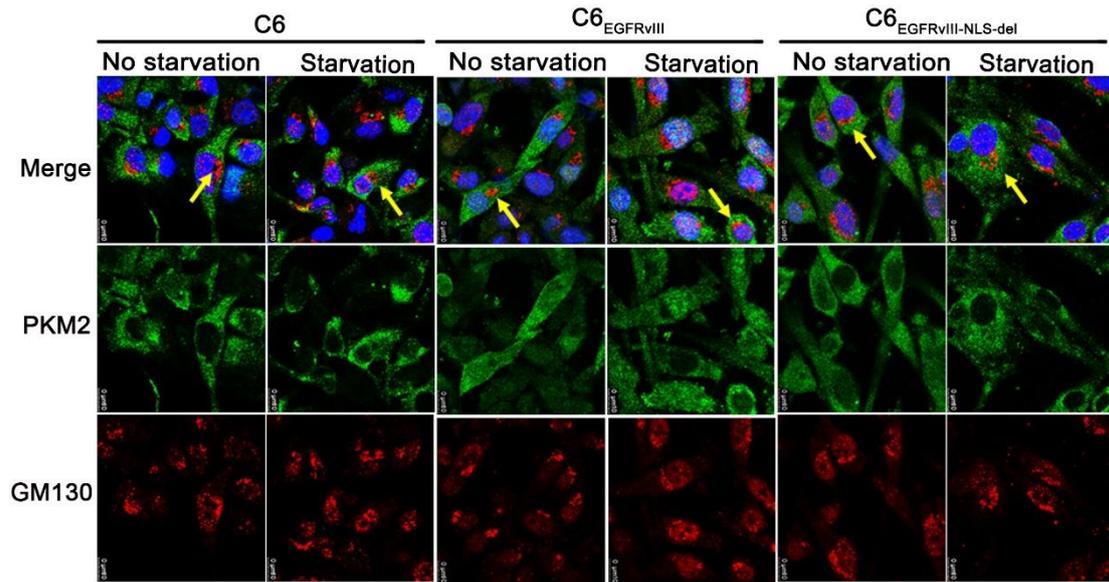


### S3: Serum-free starvation culture will not expand the positive area of syntaxin-6

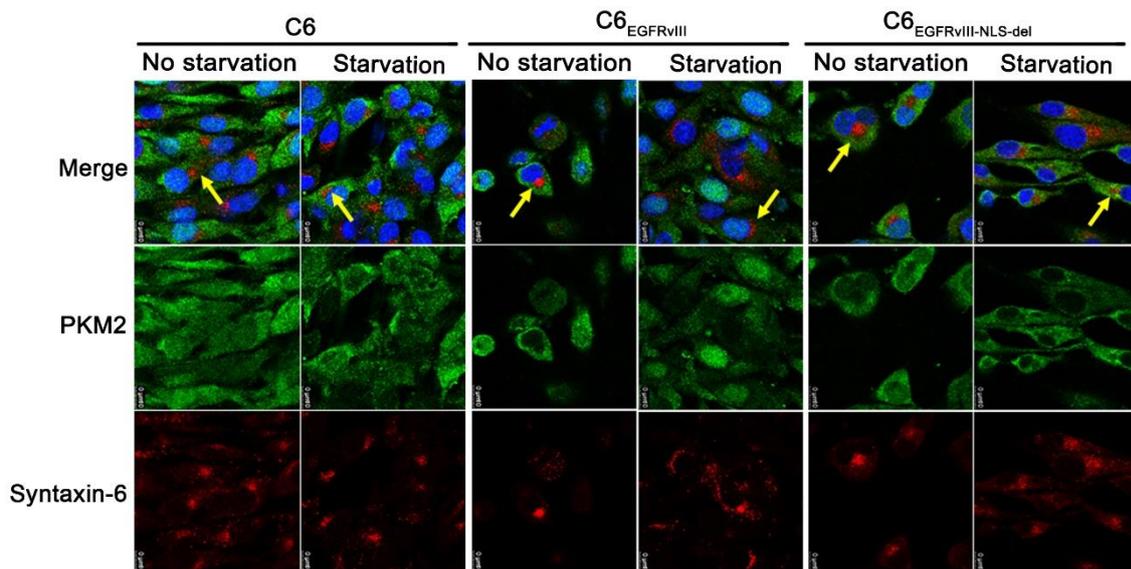
Statistical analysis of the positive area of syntaxin-6 were performed before and after serum-free starvation in U251<sub>EGFR<sup>VIII</sup></sub> and C6<sub>EGFR<sup>VIII</sup></sub> with image J software. As shown by the yellow arrow and the yellow line, we respectively analyzed the positive region of syntaxin-6 in 100 cells of U251<sub>EGFR<sup>VIII</sup></sub> and C6<sub>EGFR<sup>VIII</sup></sub>. Right histogram is a statistical result of relative areas before and after starvation.



S4: Immunoblot analysis for Flag-R399/400A of the whole protein level in C6<sub>EGFR<sup>VIII</sup></sub> and C6<sub>EGFR<sup>VIII</sup>-NLS-del</sub> after lentivirus infection. Right histogram is a statistical result of relative whole protein level of Flag-R399/400A, which indicates Flag-R399/400A has no statistical difference in this two cell lines.



S5: Immunofluorescence localization results of PKM2 and GM130 before and after 24h serum-free starvation in C6, C6<sub>EGFRVIII</sub> and C6<sub>EGFRVII-NLS-del</sub> respectively. The position of the yellow arrow indicates that there is no co-localization of PKM2 with GM130. All the scale bars are 10um.



S6: Immunofluorescence localization results of PKM2 and Syntaxin6 before and after 24h serum-free starvation in C6, C6<sub>EGFRVIII</sub> and C6<sub>EGFRVII-NLS-del</sub> respectively. The position of the yellow arrow indicates that there is no co-localization of PKM2 with Syntaxin6. All the scale bars are 10um.