Analytical and Bioanalytical Chemistry

Electronic Supplementary Material

Intraoperative detection of isocitrate dehydrogenase mutations in human gliomas using a miniature mass spectrometer

Hannah Marie Brown, Fan Pu, Mahua Dey, James Miller, Mitesh V. Shah, Scott A. Shapiro, Zheng Ouyang, Aaron A. Cohen-Gadol, R. Graham Cooks

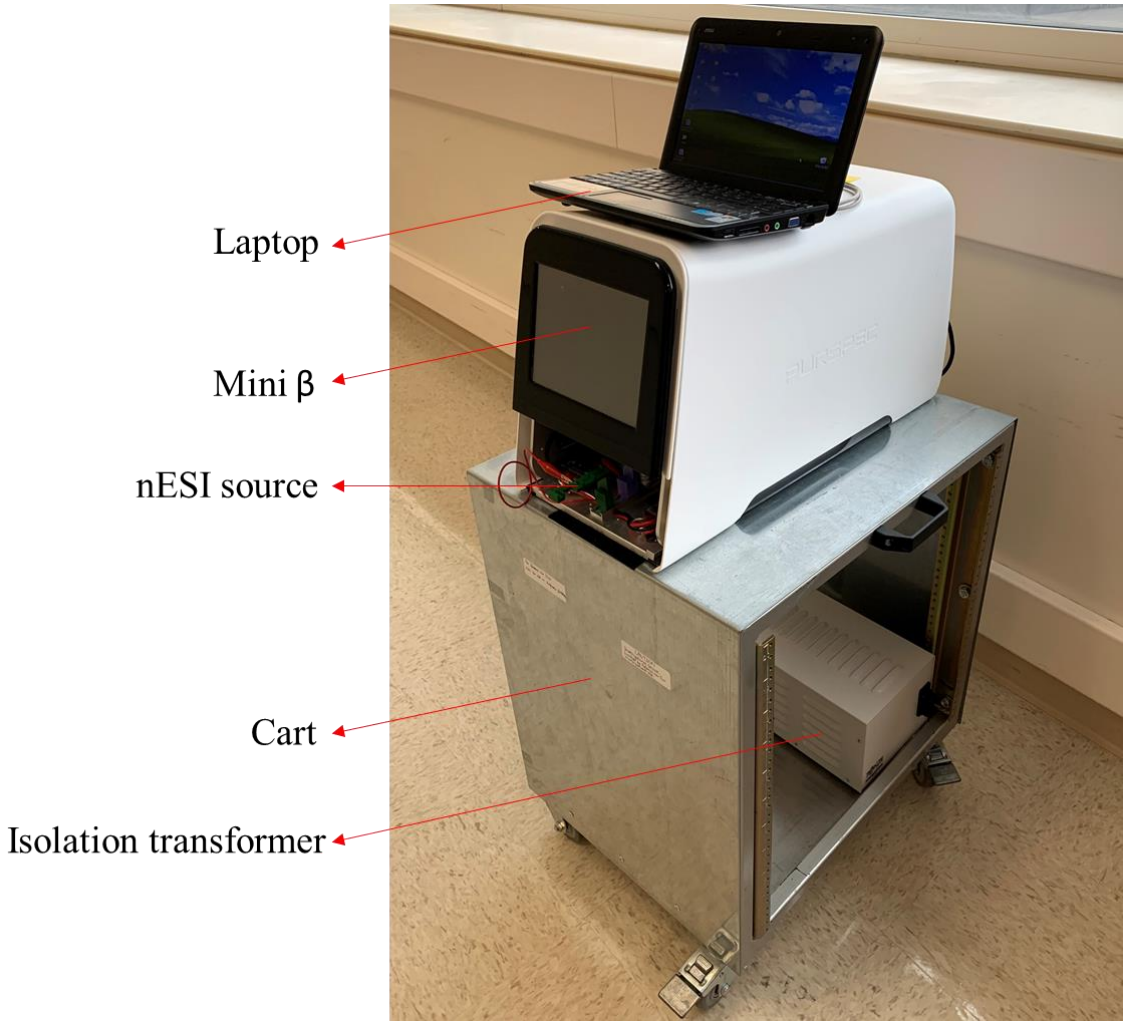

Fig. S1 System view of intraoperative Mini MS setup, the cart is mostly empty

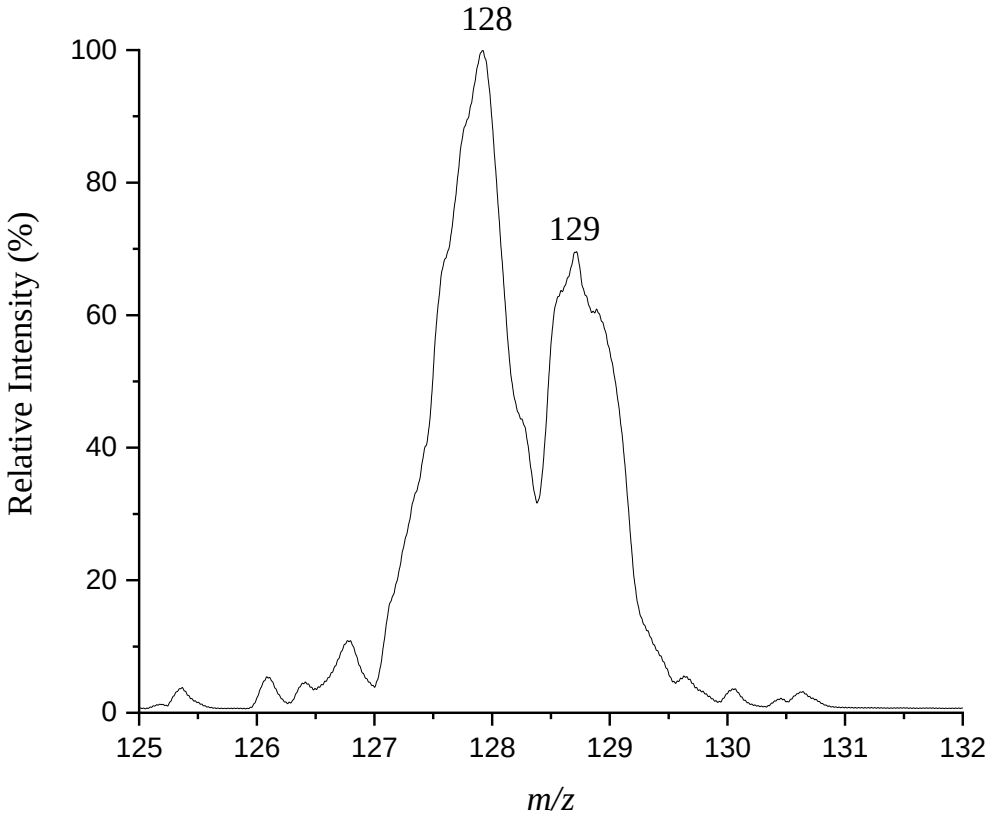

Fig. S2 Typical product ion mass spectrum of calibration mixture analyzed on Mini β. The peak *m/z* 128 is due to fragmentation of deprotonated glutamic acid (*m/z* 146) which serves as an endogenous standard while *m/z* 129 is due to fragmentation of deprotonated 2-hydroxyglutaric acid (*m/z* 147). Both precursor ions were isolated together prior to the product ion scan being recorded

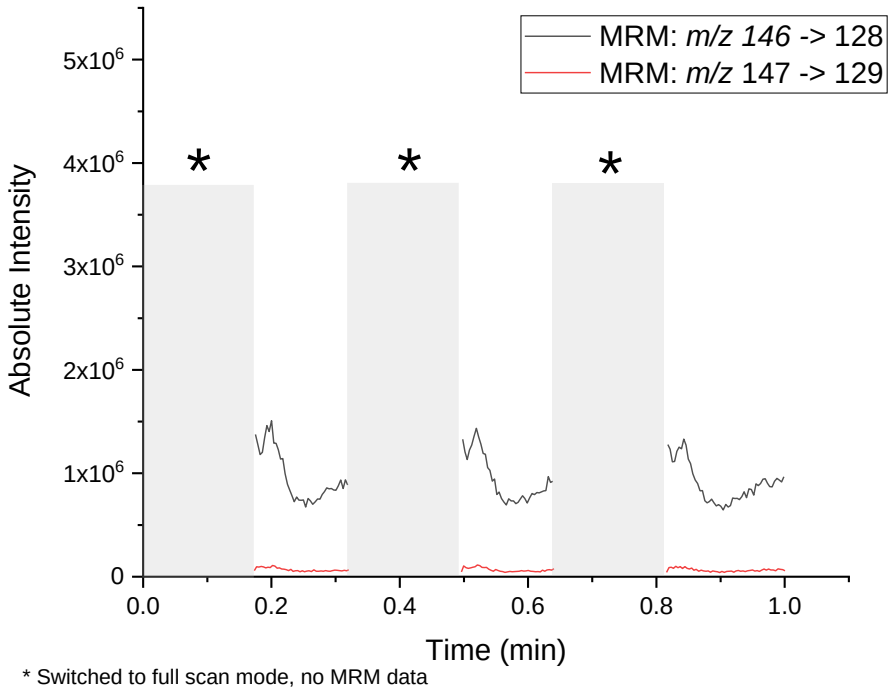

Fig. S3 Extracted ion chromatogram obtained using Thermo TSQ of an IDH wild-type human glioma. The method used to collect data alternates between full scan and MRM, resulting in EIC discontinuity

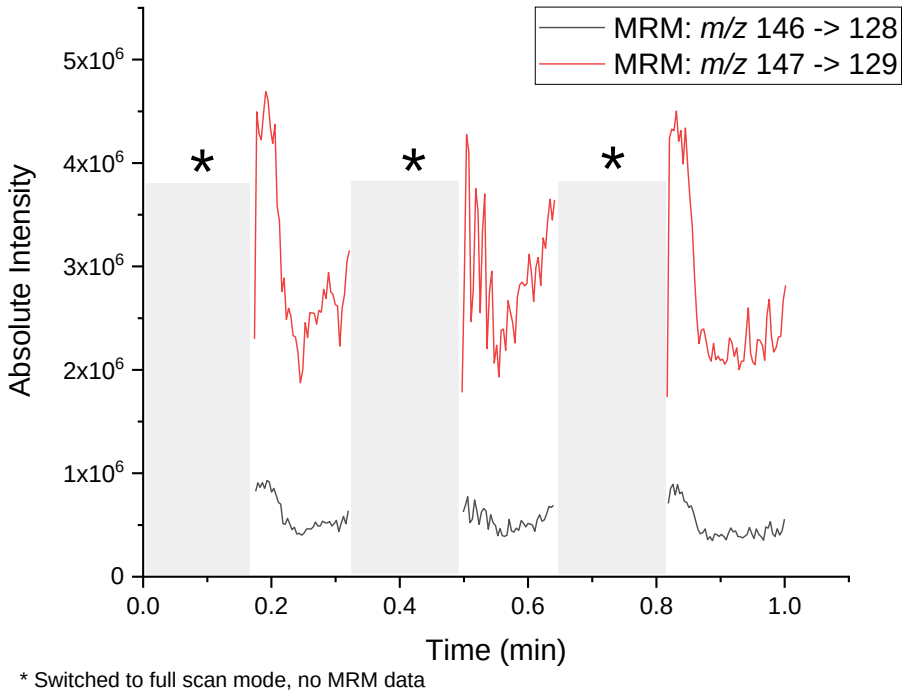

Fig. S4 Extracted ion chromatogram obtained using Thermo TSQ of an IDH mutant human glioma. The method used to collect data alternates between full scan and MRM, resulting in EIC discontinuity

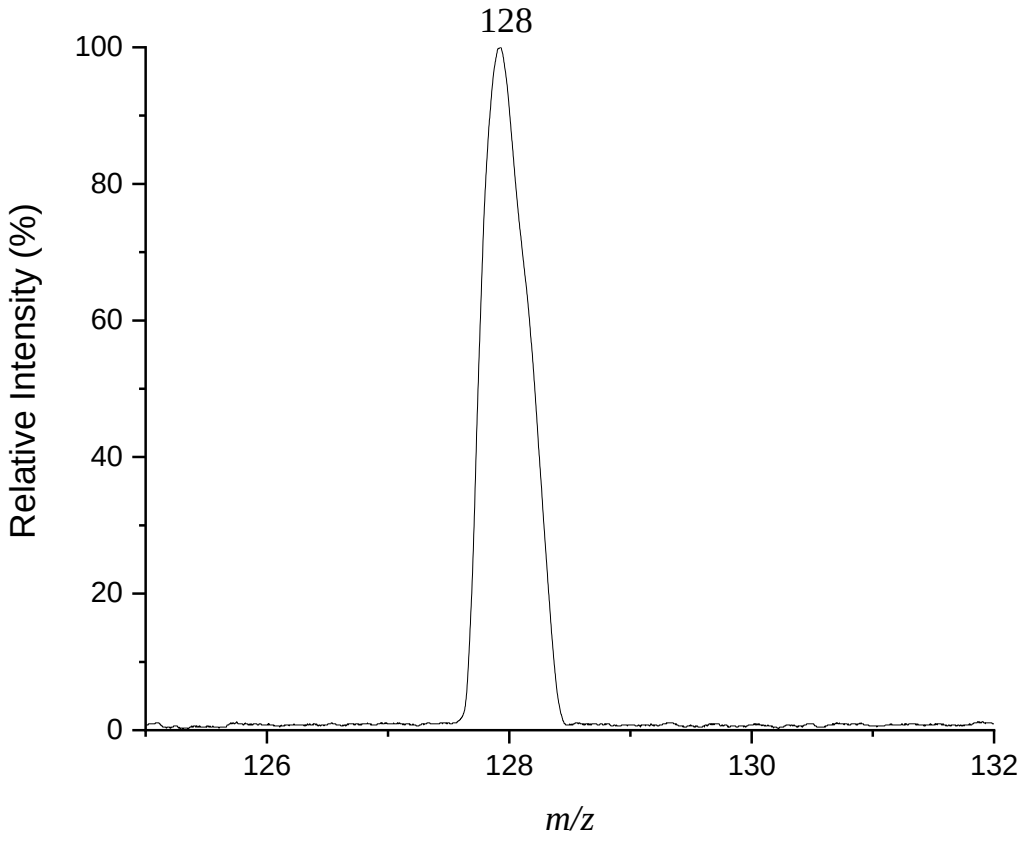

Fig. S5 Representative product ion mass spectrum of an IDH wild-type human glioma analyzed using Mini β. Note the absence of a signal for 2-HG at *m/z* 129

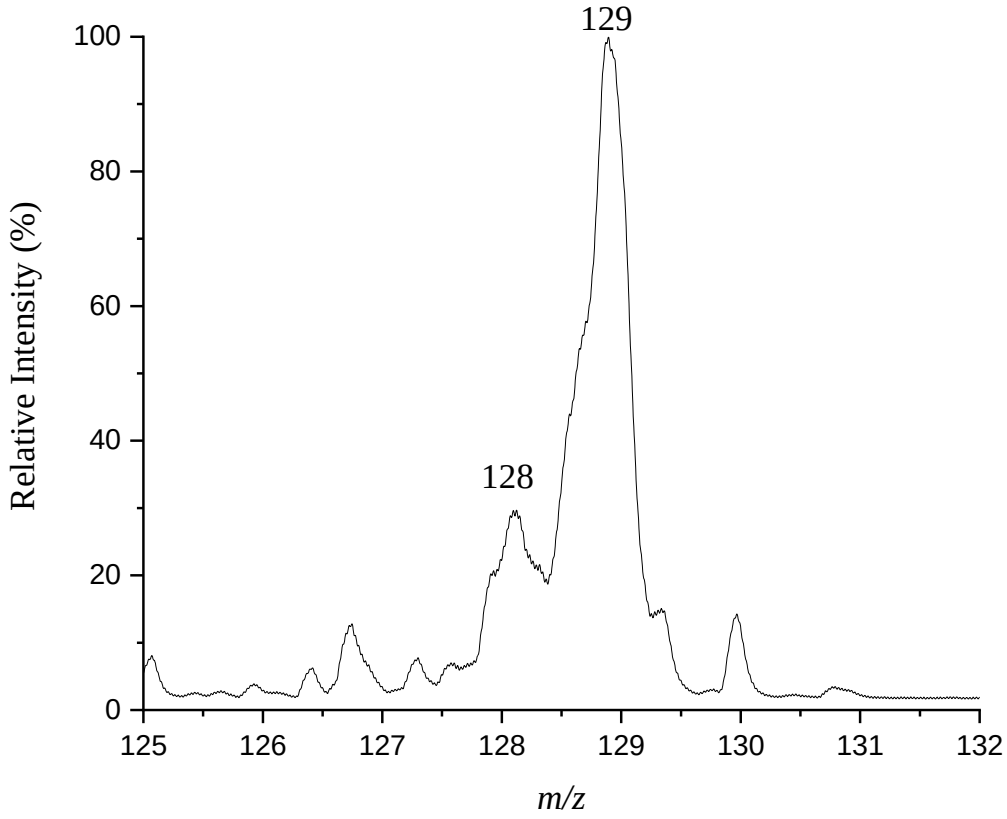

Fig. S6 Product ion mass spectrum of an IDH mutant human glioma analyzed on Mini β. Note the dominant signal for 2-HG at *m/z* 129