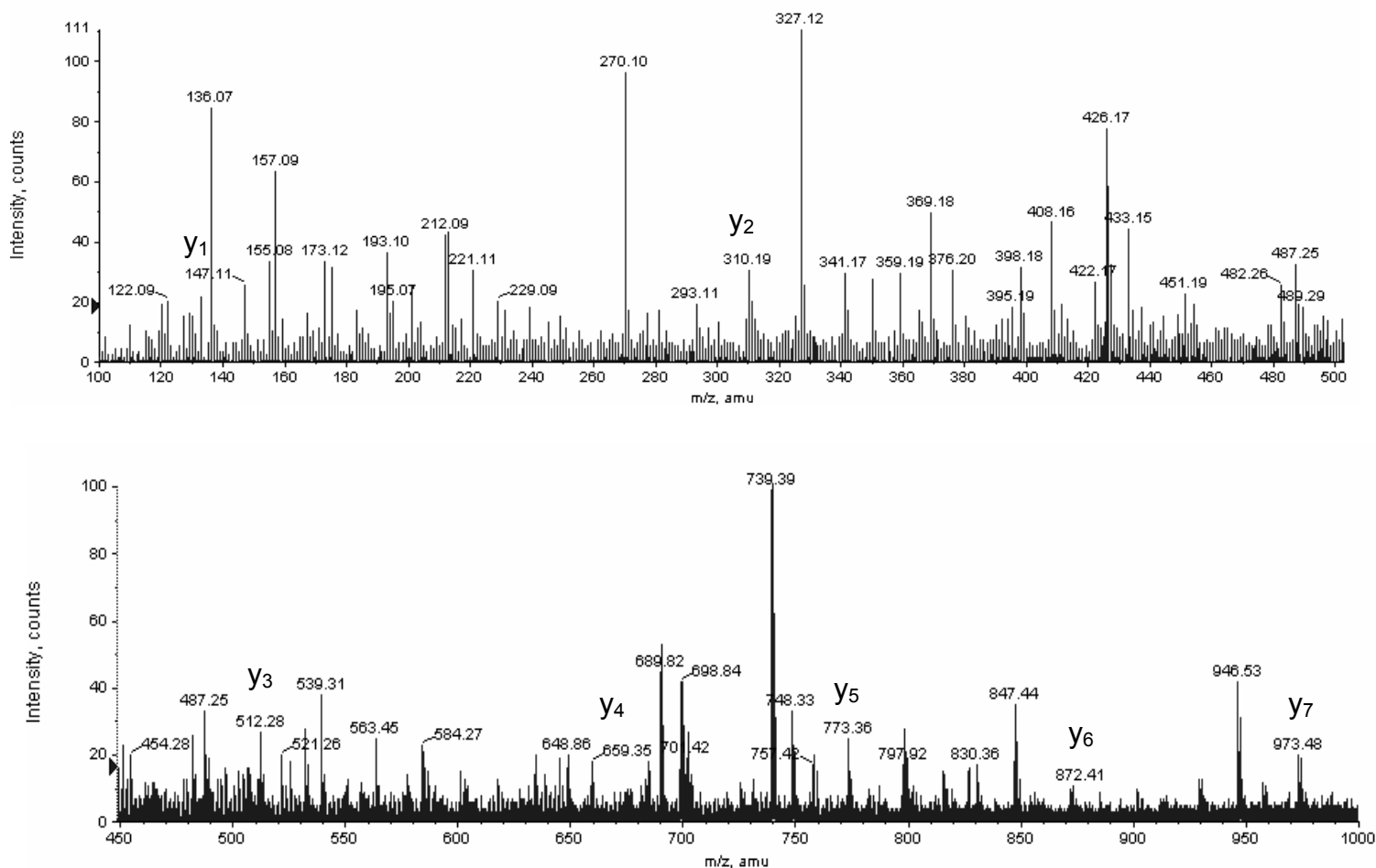


Supplementary material for  
**Auto-hydroxylation of FIH-1, an Fe(II),  $\alpha$ -ketoglutarate dependent human hypoxia sensor**

Yuan-Han Chen,<sup>a,b</sup> Lindsay M. Comeaux,<sup>b</sup> Stephen J. Eyles,<sup>c</sup> and Michael J. Knapp<sup>a,b\*</sup>

<sup>a</sup> Department of Chemistry, <sup>b</sup> Program in Molecular and Cellular Biology, <sup>c</sup> Department of Polymer Science and Engineering, University of Massachusetts, Amherst, Massachusetts 01003, USA. Fax: 413-545-4490; Tel: 413- 545-4001

E-mail: [mknapp@chem.umass.edu](mailto:mknapp@chem.umass.edu)



**Figure S1.** ESI-MS/MS spectra of trypsin-digested purple FIH-1, showing selected y-ions from the OMH<sup>+</sup> ion for peptide 252-298 ( $m = 5533$  amu). Purple FIH-1 was prepared by anaerobically mixing apo FIH-1 (100  $\mu$ M), FeSO<sub>4</sub> (500  $\mu$ M), and  $\alpha$ KG (500  $\mu$ M) in 50 mM HEPES, pH 7.50, then opening the cuvette to air. The purple FIH-1 was then concentrated and buffer exchanged to remove excess metal. Purple FIH-1 (10 mM) was digested by trypsin overnight (37°C, 50 mM Tris, pH 8.00, 1 mM CaCl<sub>2</sub>), then separated by RP-HPLC over a 150 x 2.1 mm PLRP-S column (Polymer Laboratories, Amherst, MA) using an H<sub>2</sub>O/CH<sub>3</sub>CN (0.1% formic acid) gradient. Peptide 252-298 was collected, dried, and then injected into a Qstar XL hybrid ESI-TOF for analysis.