

## Supporting Information

### Characterization of a Hemoglobin Adduct from Ethyl Vinyl Ketone Detected in Human Blood Samples

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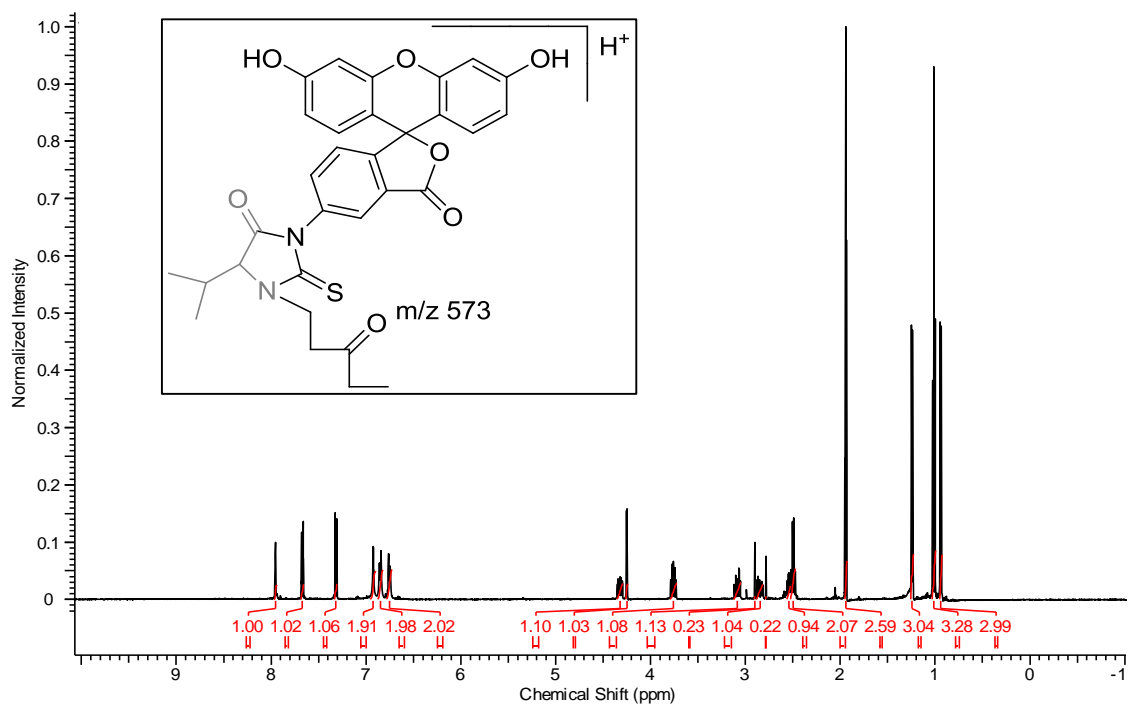
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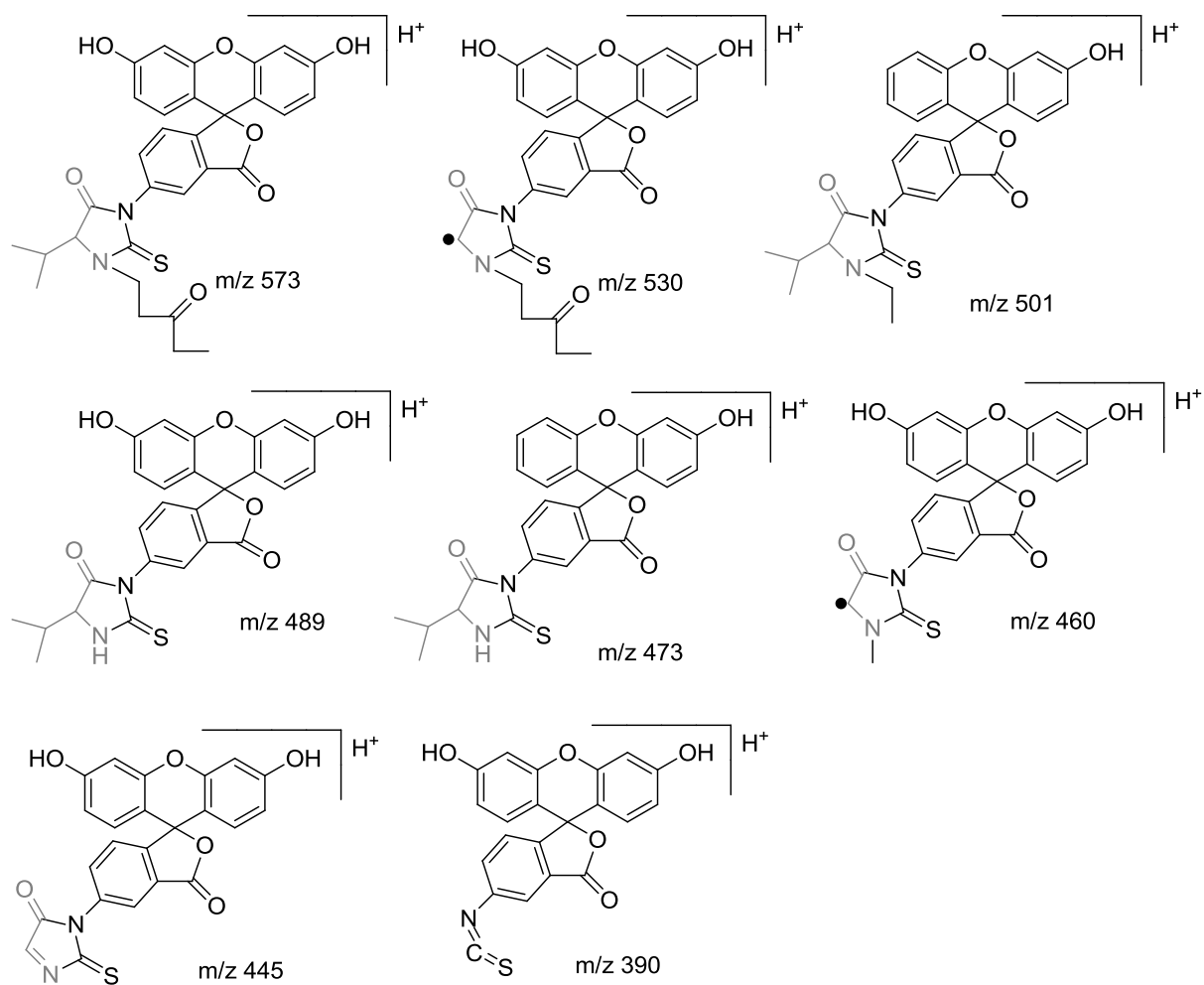
**Figure S1:**  $^1\text{H}$  NMR spectrum of the synthesized reference standard, EVK-Val-FTH.

**Figure S2:** Proposed structures of fragments observed in the MS/MS fragmentation of EVK-Val-FTH.

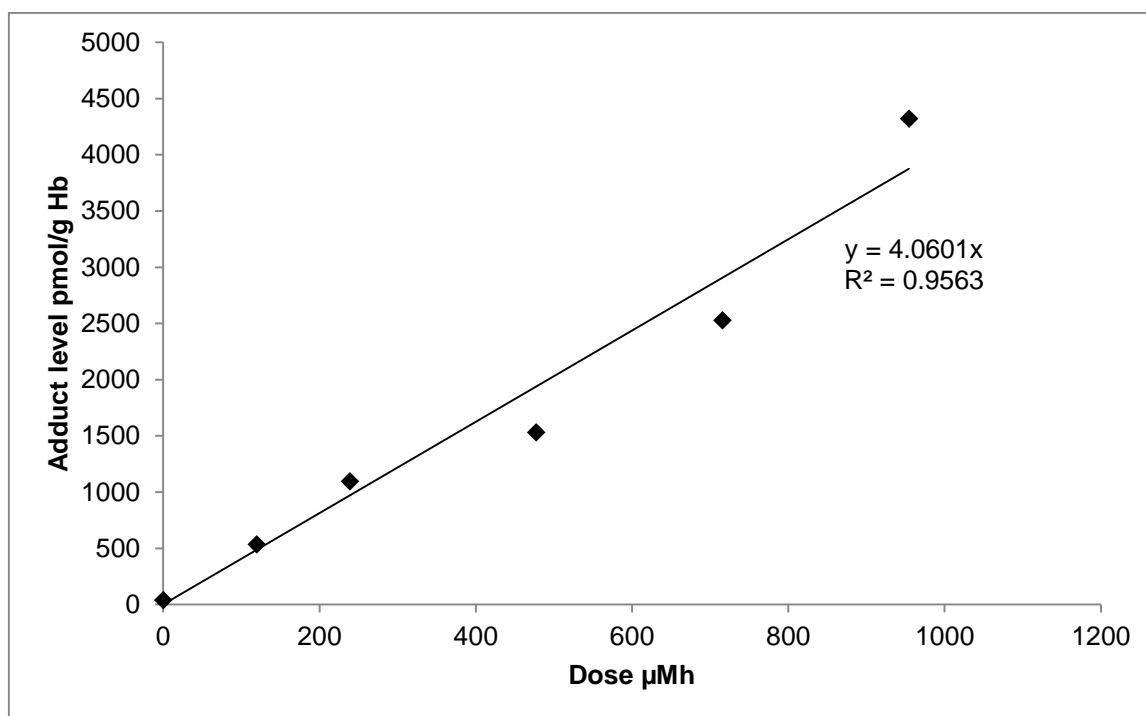
**Figure S3:** Plot of adduct level versus dose of incubation, used to calculate the reaction rate constant toward N-terminal valine in Hb,  $k_{\text{HbVal-AA}}$ , for AA.



**Figure S1.** Structure of the analyte (insert) and <sup>1</sup>H NMR spectrum of the synthesized reference standard, recorded at 500 MHz in d<sub>3</sub>-ACN.



**Figure S2.** Proposed structures of fragments observed in the MS/MS fragmentation of EVK-Val-FTH.



**Figure S3.** Plot of adduct level versus dose of incubation, used to calculate the reaction rate constant toward N-terminal valine in Hb,  $k_{HbVal-AA}$ , for AA. The reaction rate constant can be extracted as the slope of the linear regression curve of the data.