



Supplementary Figure S2: Example of an LTQ Velos MS/MS spectrum with an expectation value <0.05 that was rejected after manual assessment due to our spectral quality control criteria. This MS/MS spectrum was acquired by the Velos LTQ for precursor ion m/z at 722.02^{3+} was initially assigned to a tyrosine nitrated, methionine sulfoxide modified peptide (ETLM^{ox}GKY^{NO2}GEDSKLIYDLK) by the search engine Mascot with an expectation value of 0.021 (searching against SwissProt). However, even though many fragment ions could be assigned to b or y ions, abundant peaks (several above 50% of the base peak) remained unassigned (indicated in red letters), and could not be accounted for, i.e. at m/z 713.4, 1184.2, and 1297.3. Thus this peptide was not accepted and not entered into the list of LTQ Velos identified peptides.