

using a Micron-10 centrifugal concentrator (Millipore, Billerica, MA). 5% acetonitrile (final concentration) was added to the sample before (+) ion electrospray data were collected in the 600-1400 m/z mass range. The spray voltage was 2.8 kV and cone voltage was 40 eV. The data were processed into a “molecular mass spectrum” using MAXENT software (Micromass, Beverly, MA). The ADAR2-D (44998.1 Da, observed; 44997.1 Da, calculated) peak and ADAR2-D peaks containing IP<sub>6</sub> (660 Da MW, i.e. neutral molecule) are labeled red. The 45071.9 Da and 45730.2 Da peaks are likely an oxidized cysteine/ $\beta$ -mecaptoethanol ( $\beta$ -ME) derivative (in the crystal structure, the thiol group of C634 exists in 2 conformations on the protein surface, and appears to be oxidized). In addition, the 45137.2 peak may contain zinc (65.4 Da). Lower panel, mass spectrum of inositol hexakisphosphate (dipotassium salt) purchased from Sigma (St. Louis, MO). The compound was dissolved in water (final concentration 10 mM) diluted with acetonitrile and triethylamine (final concentrations 50% and 3%, respectively) and analyzed by electrospray in (-) ion mode. The peaks corresponding to the -1 and -2 charge states as well as a potassium salt of IP<sub>6</sub> are labeled red. IP<sub>3</sub> and IP<sub>5</sub> contaminants/hydrolysis products are also labeled.