SUPPORTING INFORMATION

FIGURE 1S. Gradient gel electrophoresis of purified camptothecin-stabilized topoisomerase-I DNA cleavage complexes. M, molecular weight markers; OC, lanes loaded with Omnicleave nuclease (no cellular material); Cpt, purified topoisomerase-I DNA cleavage complexes (CptTop1cc); Ctrl, cells treated with solvent only (no camptothecin) and processed identically to those treated with camptothecin.

FIGURE 2S. LC/MS/MS Sequence Coverage of Topoisomerase I Crosslinked to DNA by Camptothecin Exposure in Heat Shocked Cells.

FIGURE 3S. LC/MS/MS Sequence coverage for recombinant SUMO paralogs. color coded AA residues were observed in MS/MS and italic color coded AA residues were observed in multiple enzymatic digestions.

FIGURE 4S. Sequence ion assignments for the recombinant SUMO-1 peptide VIGQDSSEIHFK.

FIGURE 5S. Western blotting of purified CptTop1cc for SUMO-2/3, SUMO-1, ubiquitin, and topoisomerase I. Purified CptTop1cc (Topo I-DNA Complex) were Western blotted with anti-SUMO-1 or anti-SUMO-2/3 (top right). CptTop1cc purified from cells exposed to heat shock (42°C) was included in the SUMO-2/3 Western blot. A SUMO-1 Western blot was also done on whole cell lysate (top left) to show that the antibody could detect SUMO-1 modified RanGap1 at ~ 90 kDa. Whole cell extract

(EXT), and CptTop1cc purified from cells treated with camptothecin at 37°C, heat shocked at 42°C, or depleted of ATP (AD) were Western blotted with anti-ubiquitin antibody (lower left). The membrane was then stripped and re-probed with anti-topoisomerase I antibody (lower right).

TABLE 1S. Sequence ion assignments for the ubiquitin peptide TITLEVEPSDTIENVK from purified CptTop1cc.

TABLE 2S. Sequence ion assignments for the unique SUMO-2 peptide TENNDHINLK from purified CptTop1cc.

TABLE 3S. Sequence ion assignments for recombinant SUMO-1peptide VIGQDSSEIHFK.