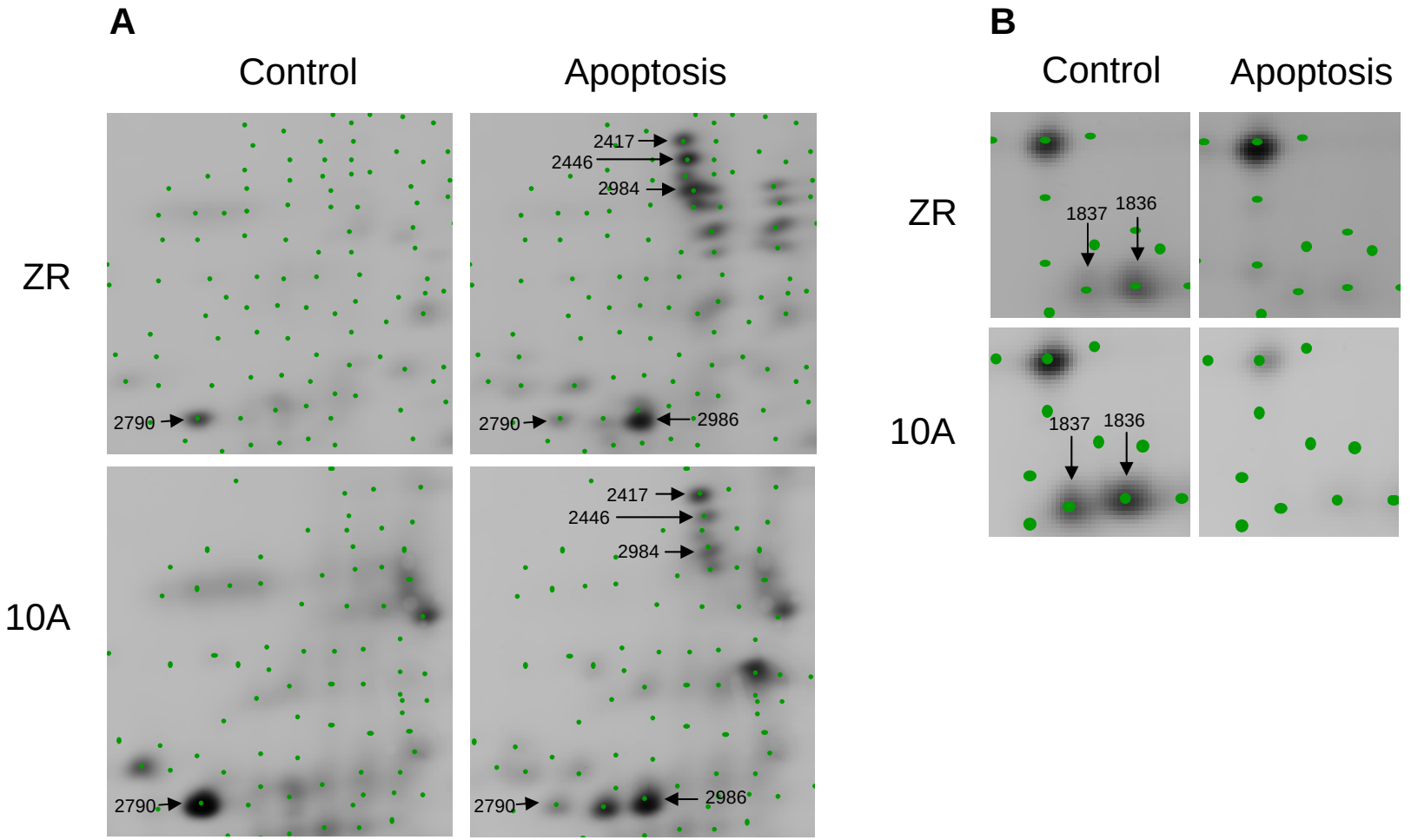
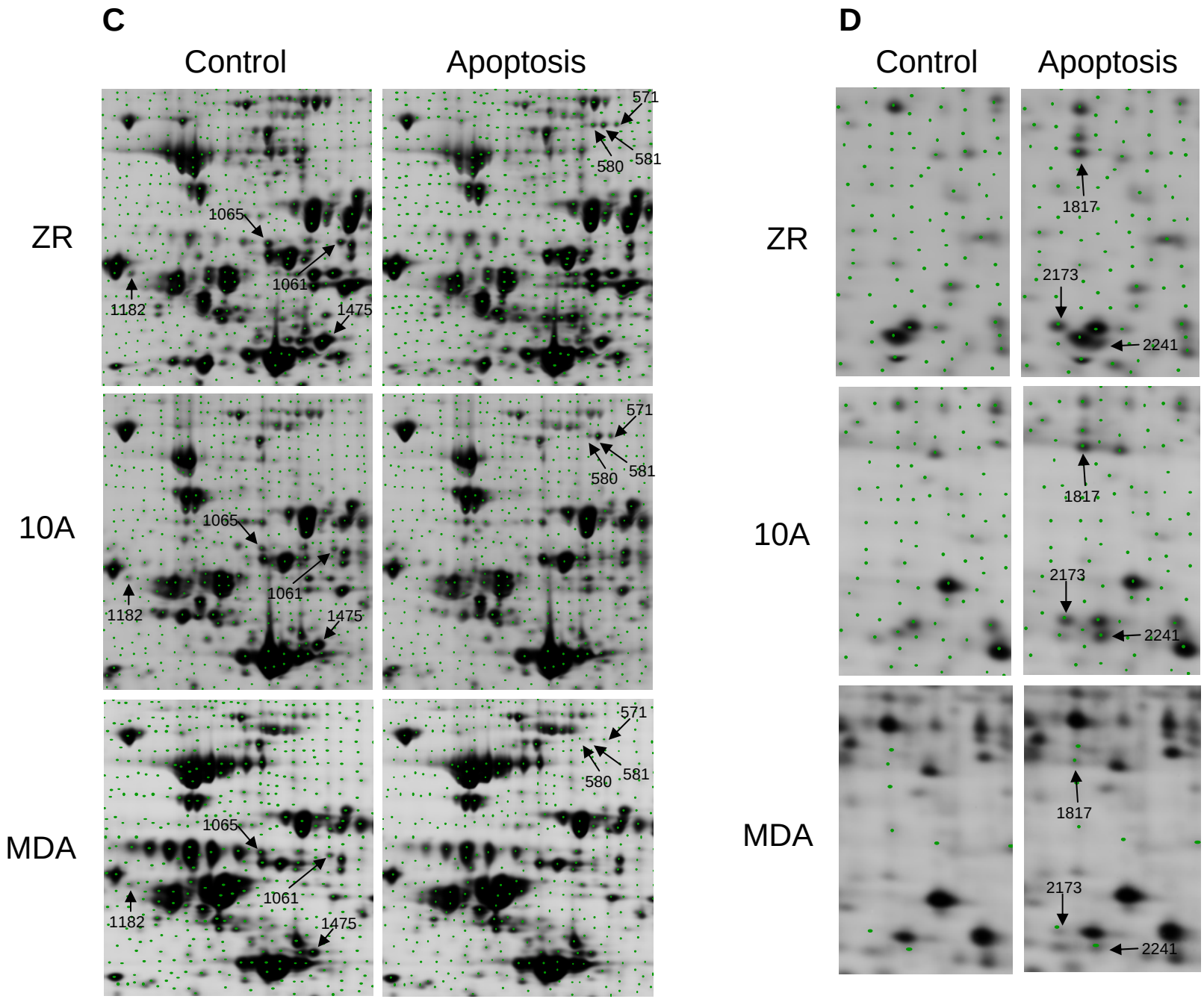
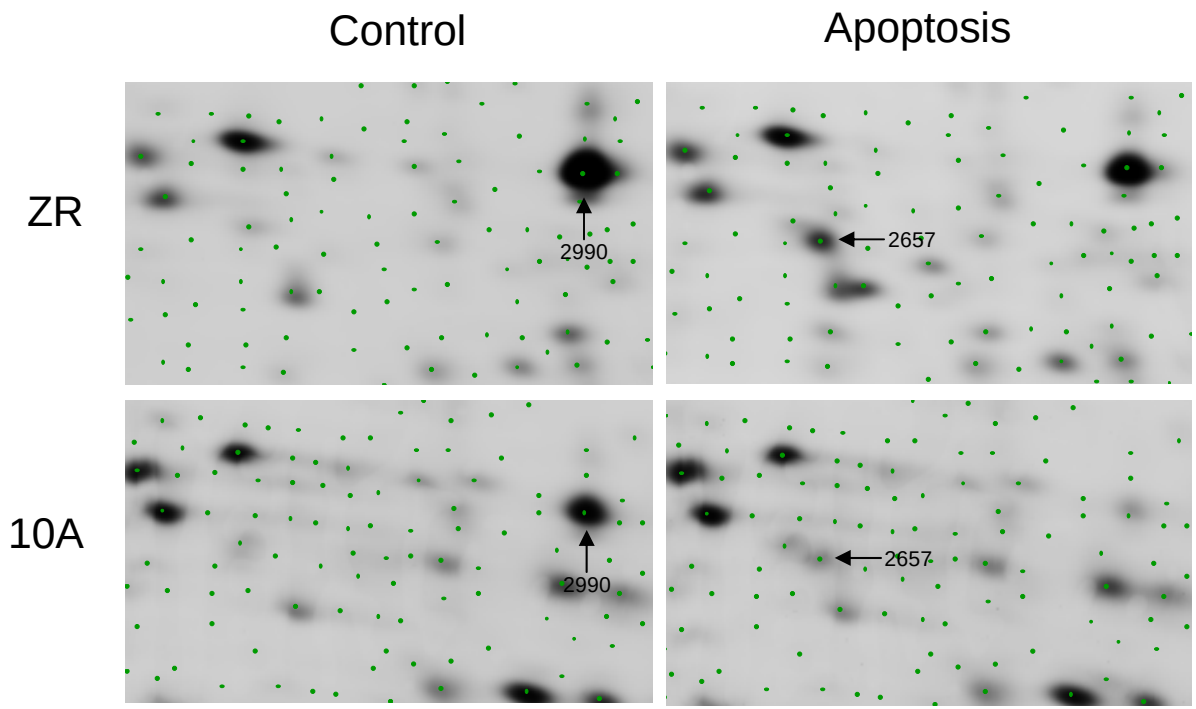
Supplementary Figure S1. Magnification of framed areas in Figure 3 of 2D-DIGE images of cell lysates from Dox-TRAIL and DMSO control breast cell lines. Differentially-expressed proteins (arrows) in A) frame F1, B) frame F2, C) frame F3, D) frame F4, E) frame F5 are common to at least 2 breast cell lines. The protein identities corresponding to the spot numbers are shown in Table 2. The results were consistent across 2D-DIGE gels of 3 biologically-independent pairs of Dox-TRAIL and DMSO control samples for each cell line.

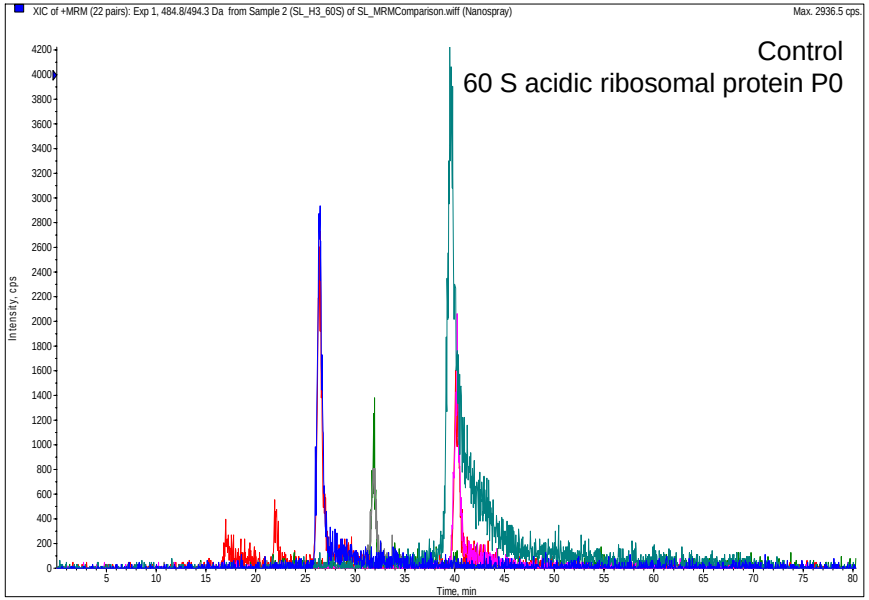


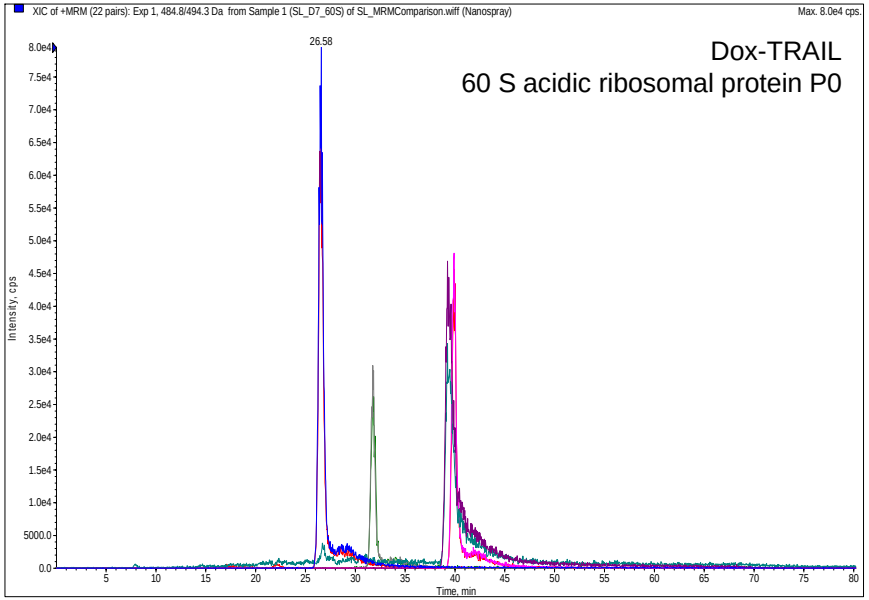

C
Control
Apoptosis
ZR
10A
MDA
1065
1061
1182
1475
571
580
581
D
Control
Apoptosis
ZR
10A
MDA
1817
2173
2241

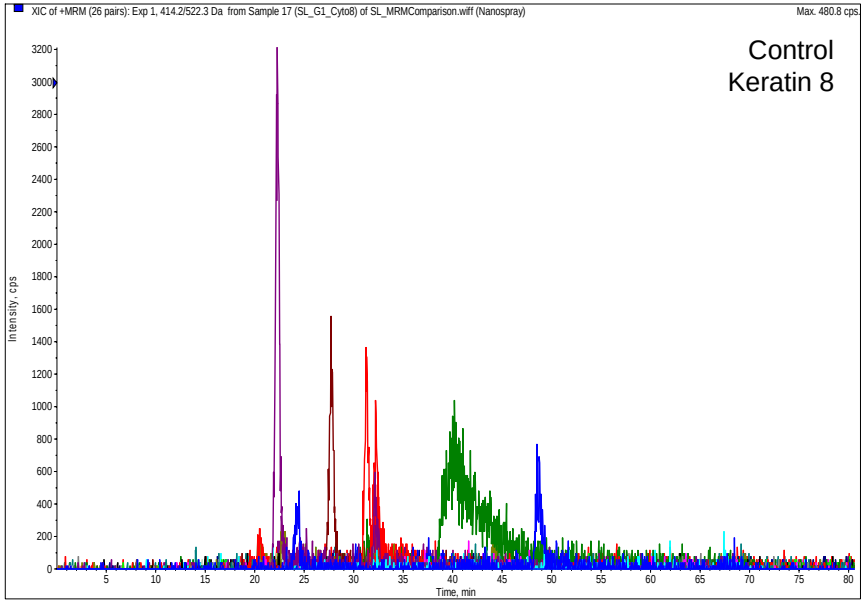
E

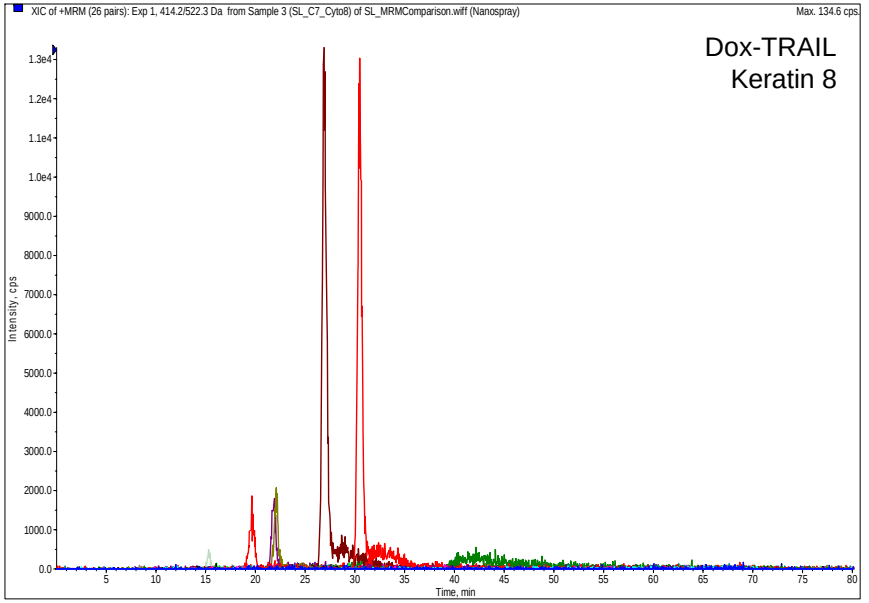


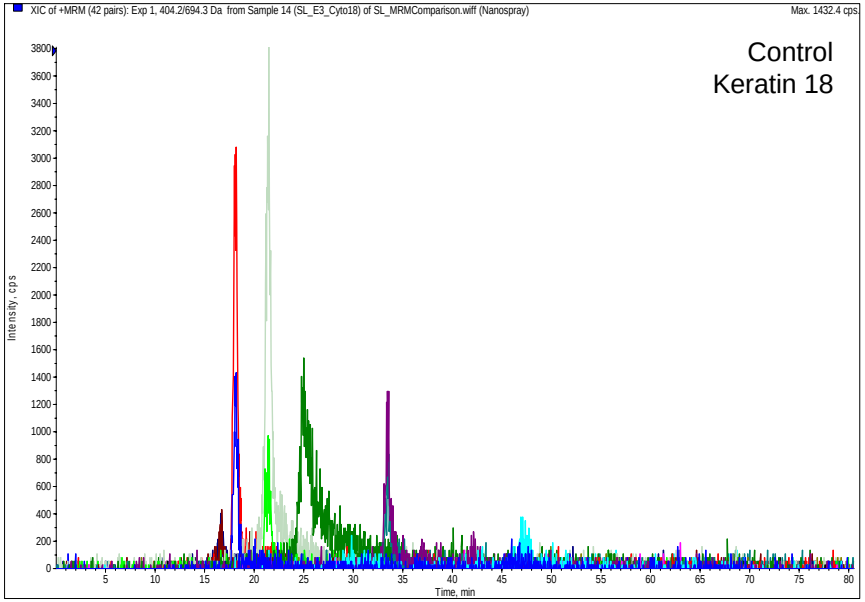
Supplementary Figure S2: Extracted ion chromatograms displaying the detection of peptides from selected proteins in control and Dox-TRAIL samples.

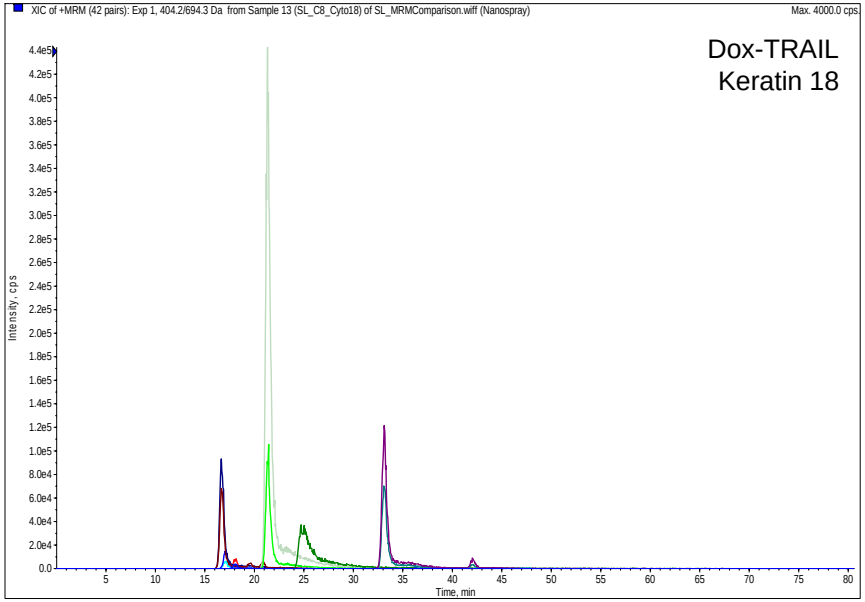


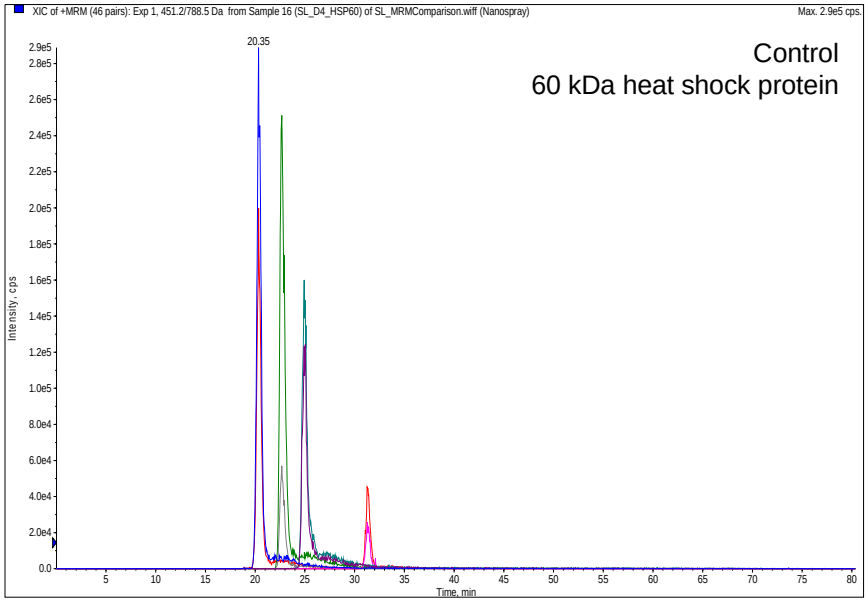


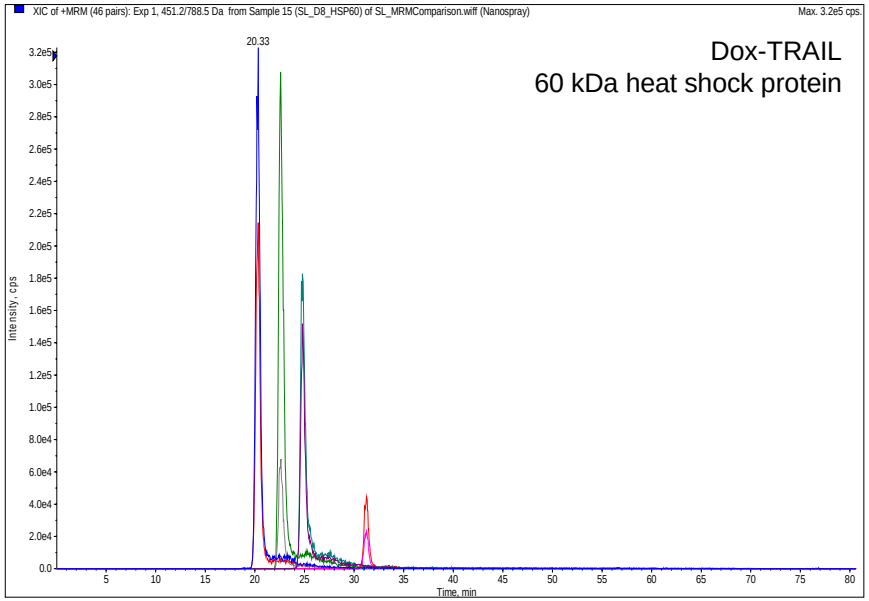


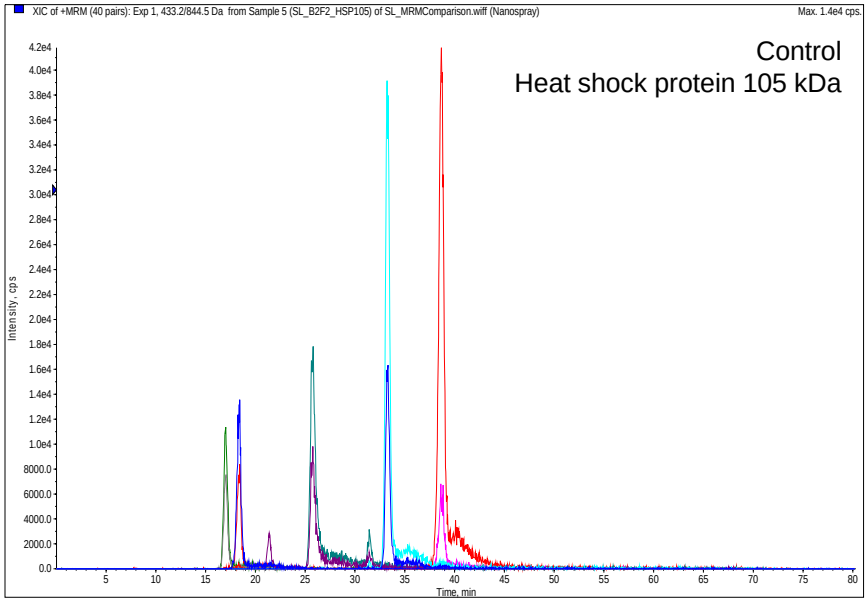


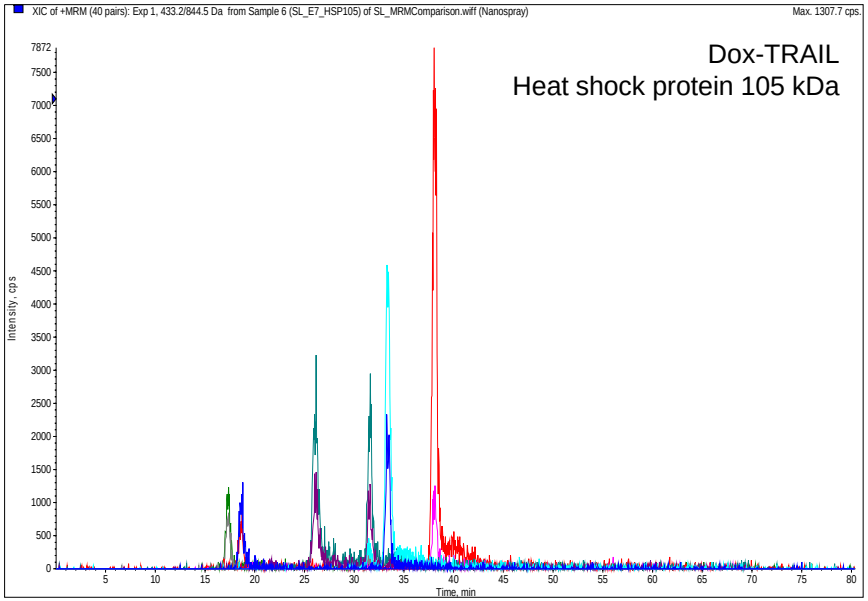

XIC of +MRM (42 pairs): Exp 1, 404.2/694.3 Da from Sample 14 (SL_E3_Cyto18) of SL_MRMComparison.wiff (Nanospray)
Max. 1432.4 cps.
Control
Keratin 18
Intensity, cps
Time, min

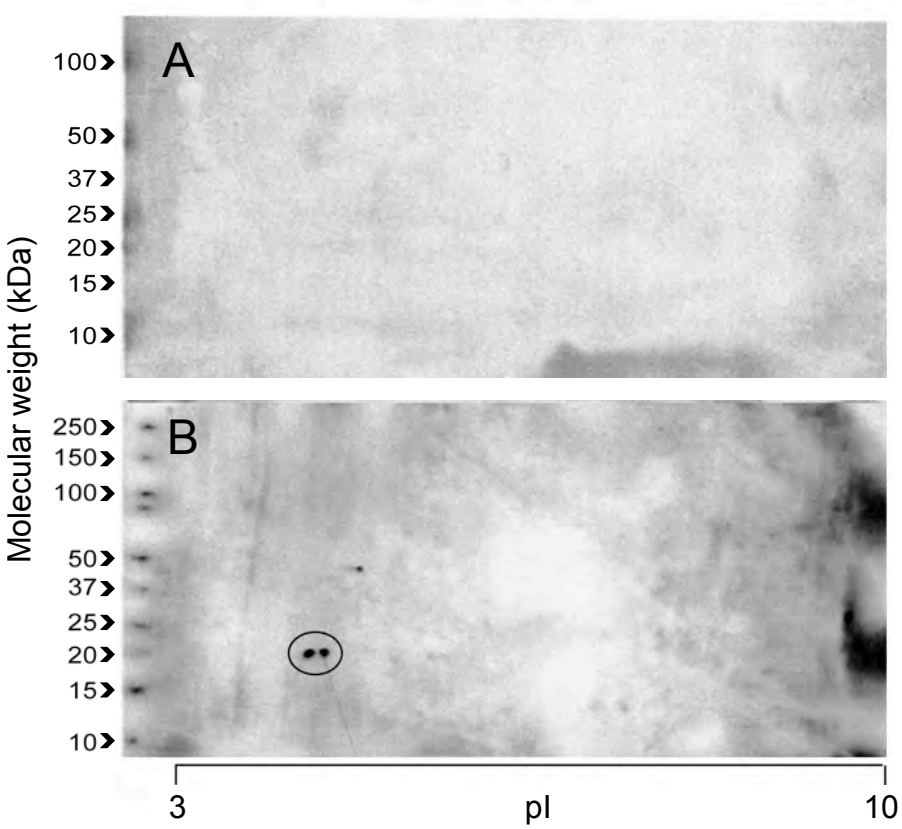

XIC of +MRM (42 pairs): Exp 1, 404.2/694.3 Da from Sample 13 (SL_C8_Cyto18) of SL_MRMComparison.wiff (Nanospray)
Max. 4000.0 cps.
Dox-TRAIL
Keratin 18
Intensity, cps
Time, min


XIC of +MRM (46 pairs): Exp 1, 451.2/788.5 Da from Sample 16 (SL_D4_HSP60) of SL_MRMComparison.wiff (Nanospray)
Max. 2.9e5 cps.
20.35
Control
60 kDa heat shock protein
Intensity, cps
Time, min


XIC of +MRM (46 pairs): Exp 1, 451.2/788.5 Da from Sample 15 (SL_D8_HSP60) of SL_MRMComparison.wiff (Nanospray)
Max. 3.2e5 cps.
20.33
Dox-TRAIL
60 kDa heat shock protein
Intensity, cps
Time, min


XIC of +MRM (40 pairs): Exp 1, 433.2/844.5 Da from Sample 5 (SL_B2F2_HSP105) of SL_MRMComparison.wiff (Nanospray)
Max. 1.4e4 cps.
Control
Heat shock protein 105 kDa
Intensity, cps
Time, min


XIC of +MRM (40 pairs): Exp 1, 433.2/844.5 Da from Sample 6 (SL_E7_HSP105) of SL_MRMComparison.wiff (Nanospray)
Max. 1307.7 cps.
Dox-TRAIL
Heat shock protein 105 kDa
Intensity, cps
Time, min



Supplementary Figure S3. 2D-PAGE/immunoblot validation of caspase-cleaved cytokeratin 18 (KRT18) fragments. Immunoblotting with M30 CytoDeath monoclonal antibody, against a caspase specific KRT18 cleavage site, in lysates of (A) control and (B) Dox-TRAIL-treated ZR-75-1 cells. Caspase-cleaved KRT18 fragments are circled in panel B.

Supplementary Methods. For 2D-PAGE/immunoblotting, IPG strips in the range of pH 3-10 (non-linear; 11 cm; Bio-Rad) were passively rehydrated with 100 µg protein from lysates of ZR-75-1 cells in rehydration buffer overnight. Isoelectric focusing (IEF) was performed using a PROTEAN IEF Cell (Bio-Rad) for a total of 38 kVh at 20^{o}C. After IEF, IPG strips were equilibrated with buffer containing 6 M urea, 50 mM Tris-HCl pH 8.8, 20% (v/v) glycerol, 2% SDS, 5mM TBP, 2.5% acrylamide) for 15 min. Following second dimension run with 4-12% Criterion XT Bis-Tris precast gels (11 cm, Bio-Rad), proteins were transferred onto nitrocellulose membranes (GE Healthcare Biosciences), and immunoblotted with biotin-conjugated M30 CytoDeath monoclonal antibody (Enzo Life Sciences, NY) specific for caspase-cleaved KRT18. Horseradish peroxidase-conjugated immunoglobulins against mouse were used, and protein signals were visualized with Enhanced Chemiluminescence (ECL) *Plus* reagent (GE Healthcare Biosciences) using the LAS3000 digital imaging system (Fuji Film, Tokyo, Japan).