

Supplementary Figure 1. Functional and pathway enrichment analysis of differentially expressed genes

(A) The bubble chart displays the enrichment results of genes in the GO functional annotation and KEGG pathway databases. The results are grouped by category: biological processes, cellular components, molecular functions, and signaling pathways.

Supplementary Figure 2. Uncropped western blots for Figure 2B

Full-length scans of membranes probed for mitochondrial apoptosis-related proteins in Figure 2B. Molecular weight markers (kDa) are indicated. Red boxes indicate cropped regions. Lanes: Marker = protein ladder; vehicle = control group; L-DIPH, M-DIPH, H-DIPH = cells treated with increasing concentrations of diphenhydramine. (A) c-Casp9 (A549), expected size: 35 kDa; (B) c-Casp9 (PC9), expected size: 35 kDa; (C) c-Casp3 (A549 and PC9), expected size: 17 kDa; (D) Cyt c (A549), expected size: 14 kDa; (E) Cyt c (PC9), expected size: 14 kDa; (F) BAX (A549), expected size: 20 kDa; (G) BAX (PC9), expected size: 20 kDa; (H) GAPDH (A549), expected size: 37 kDa; (I) GAPDH (PC9), expected size: 37 kDa.

Supplementary Figure 3. Uncropped western blots for Figure 2D

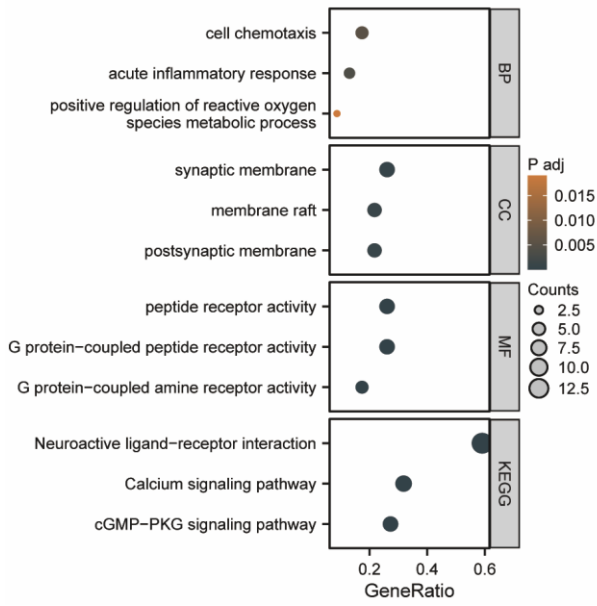
Full-length scans of membranes probed for DNA damage response proteins in Figure 2D. Molecular weight markers (kDa) are indicated. Red boxes indicate cropped regions. Lanes: Marker = protein ladder; vehicle = control group; L-DIPH, M-DIPH, H-DIPH = cells treated with increasing concentrations of diphenhydramine. For p-ATM, HiMark™ Pre-stained Protein Standard (LC5699) was used; additional bands above 460 kDa are marker-related components. (A) γ -H2AX (A549), expected size: 15 kDa; (B) γ -H2AX (PC9), expected size: 15 kDa; (C) p-ATM (A549), expected size: 350 kDa; (D) p-ATM (PC9), expected size: 350 kDa; (E) p-CHK1 (A549), expected size: 56 kDa; (F) p-CHK1 (PC9), expected size: 56 kDa; (G) p-CHK2 (A549), expected size: 62 kDa; (H) p-CHK2 (PC9), expected size: 62 kDa; (I) GAPDH (A549), expected size: 37 kDa; (J) GAPDH (PC9), expected size: 37 kDa.

Supplementary Figure 4. Uncropped western blots for Figure 3B

Full-length scans of membranes probed for antioxidant enzymes in Figure 3B. Molecular weight markers (kDa) are indicated. Red boxes indicate cropped regions. Lanes: Marker = protein ladder; vehicle = control group; L-DIPH, M-DIPH, H-DIPH = cells treated with increasing concentrations of diphenhydramine. (A) CAT (A549), expected size: 60 kDa; (B) CAT (PC9), expected size: 60 kDa; (C) SOD2 (A549), expected size: 25 kDa; (D) SOD2 (PC9), expected size: 25 kDa; (E) GAPDH (A549), expected size: 37 kDa; (F) GAPDH (PC9), expected size: 37 kDa.

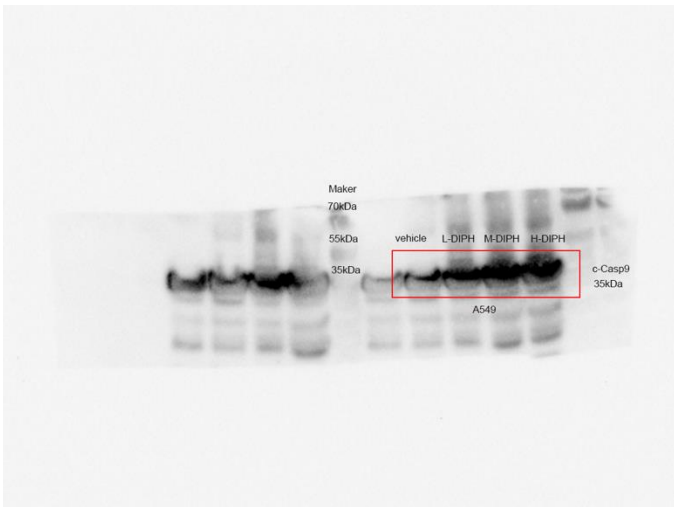
Supplementary Figure 1

A

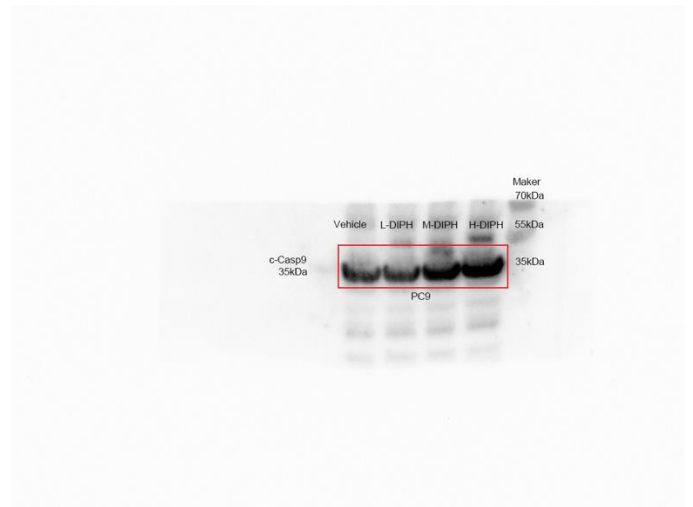


Supplementary Figure 2

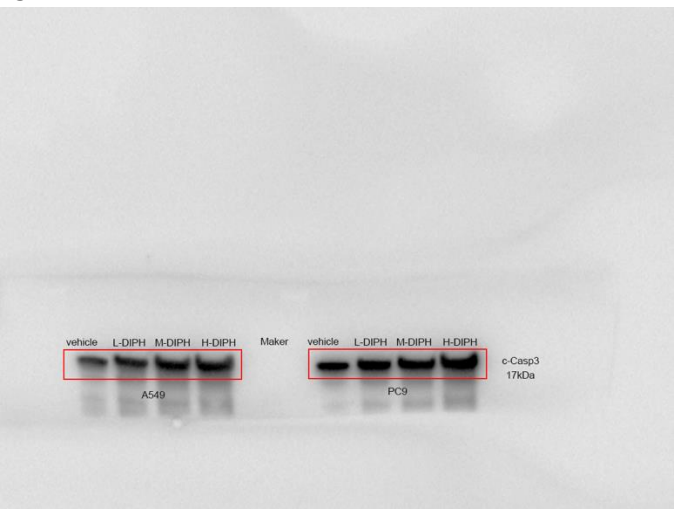
A



B



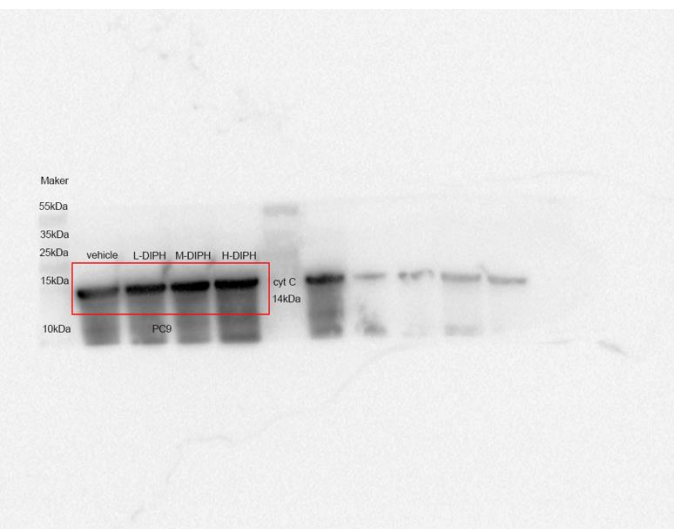
C



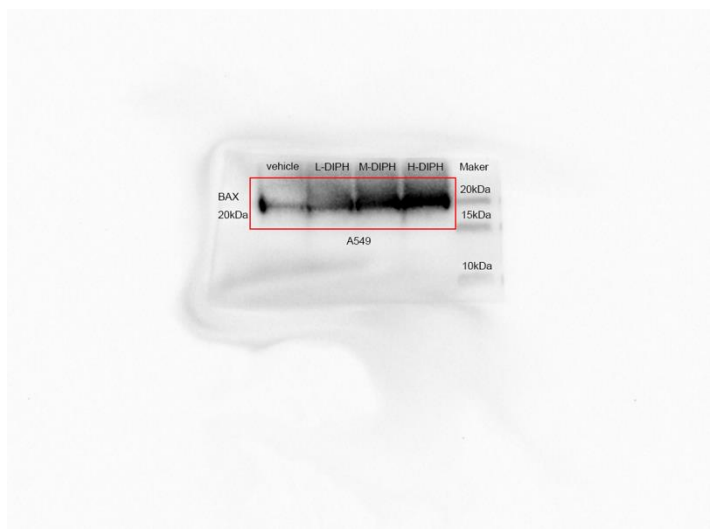
D



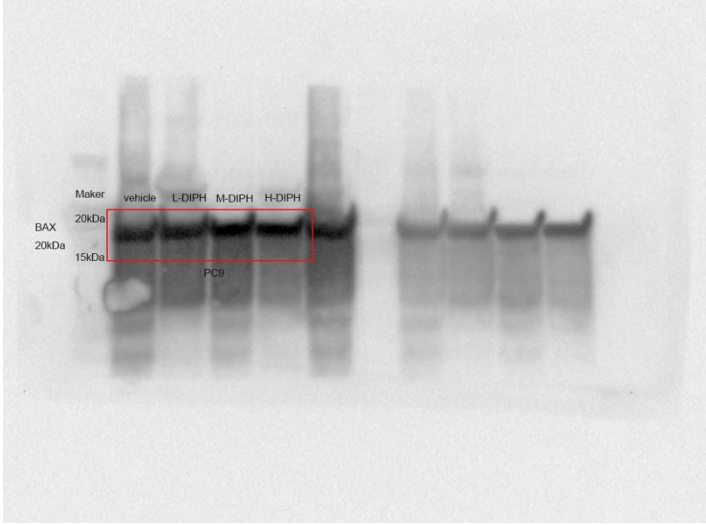
E



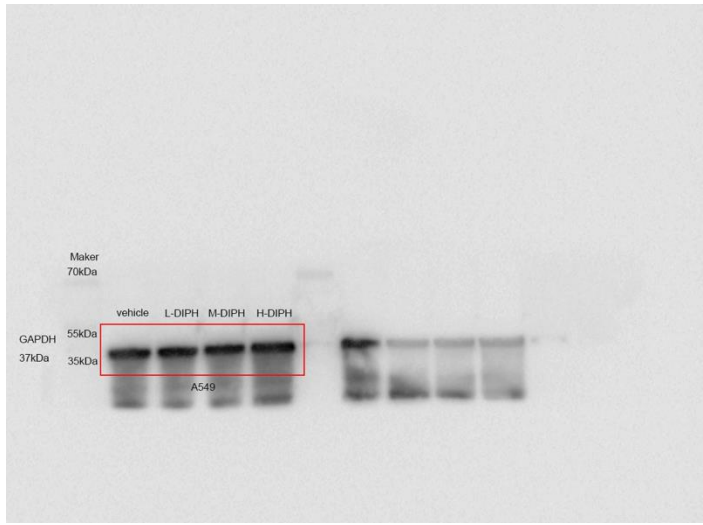
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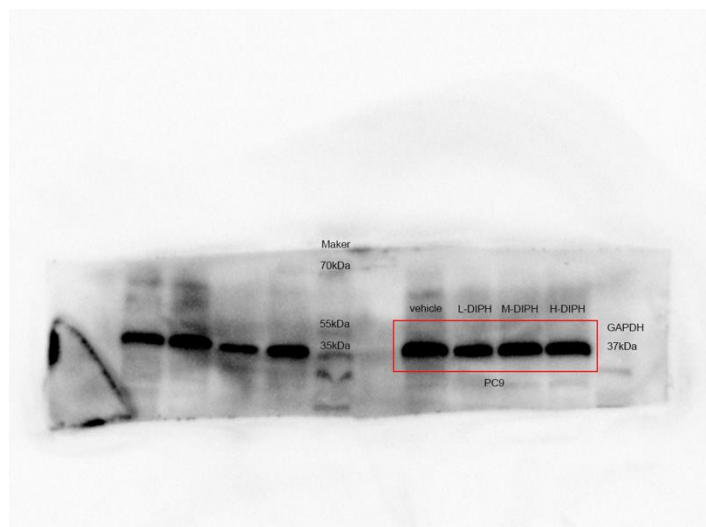
G



H



I

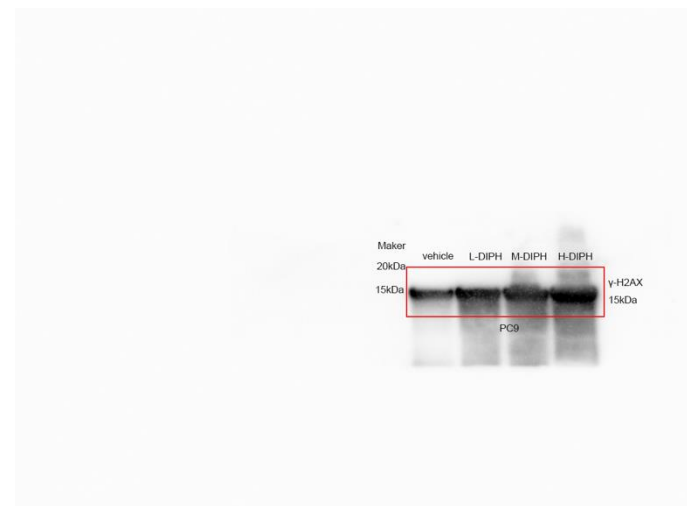


Supplementary Figure 3

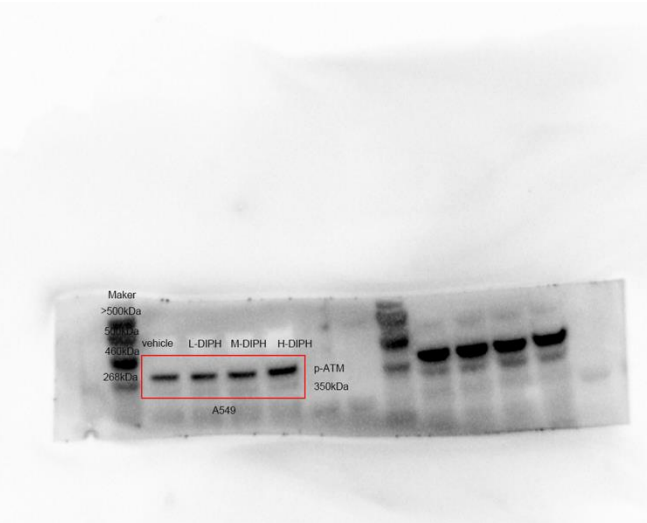
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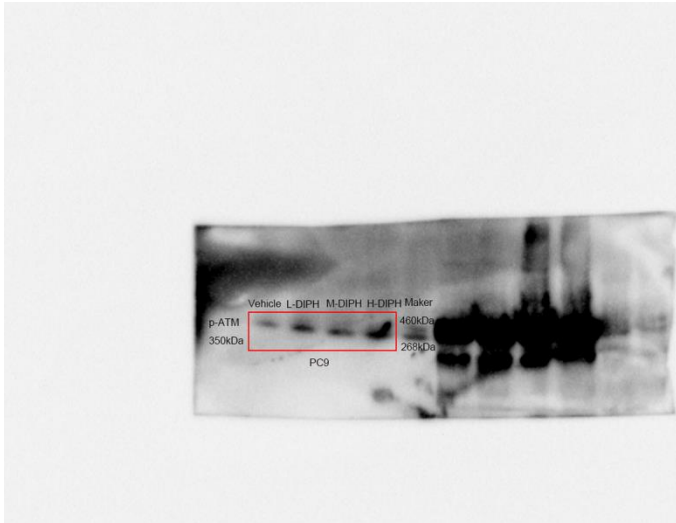
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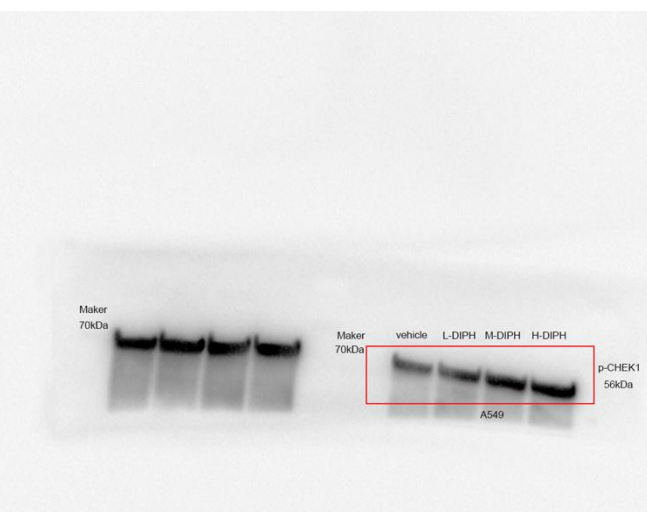
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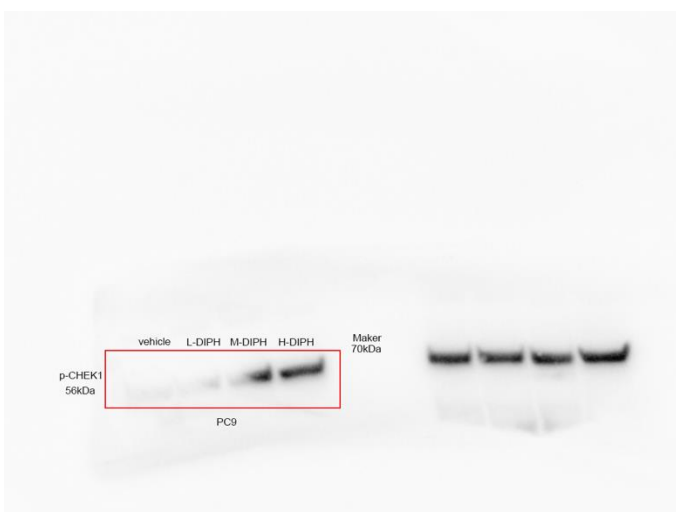
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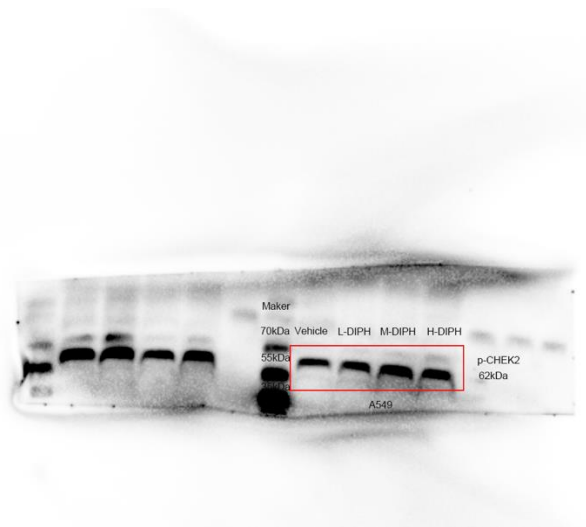
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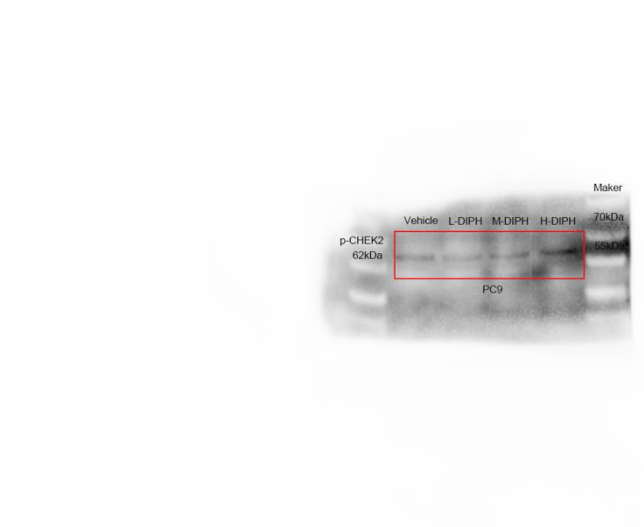
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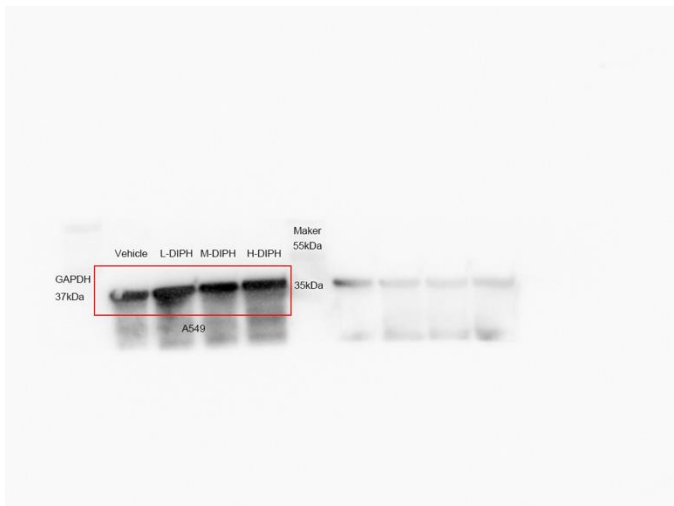
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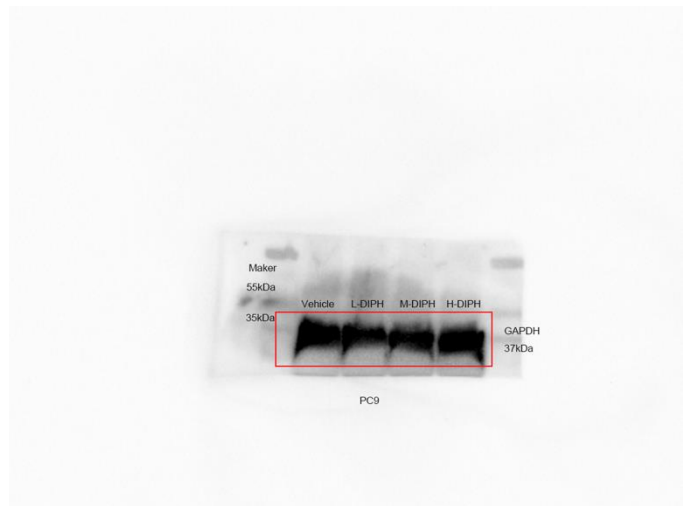
H



I

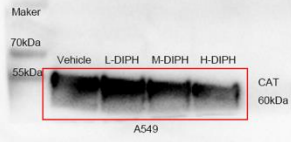


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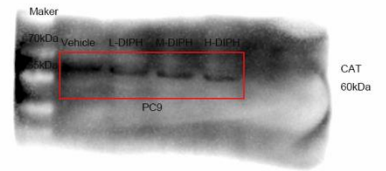


Supplementary Figure 4

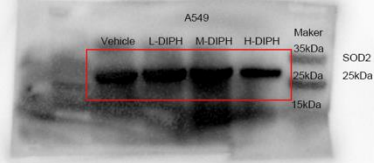
A



B



C



D



E



F

