## **Description of Additional Supplementary Files**

File Name: Supplementary Data 1

Description: Differential gene expression analysis of THP-1 cells after 24 hours of treatment with

3μM SPHINX31 compared to vehicle treated control

File Name: Supplementary Data 2

Description: Gene Set Enrichment Analysis of significantly downregulated genes after 24 hours

treatment of THP-1 cells with 3µM SPHINX31

File Name: Supplementary Data 3

Description: Splice site changes identified in THP-1 cells after transduction with SRPK1 gRNA

compared to empty control.

File Name: Supplementary Data 4

Description: Overlap of significant splicing events between genetic and pharmacological inhibition

of SRPK1

File Name: Supplementary Data 5

Description: Gene Set Enrichment Analysis of genes with significant splicing modulation after 24

hours treatment of THP-1 cells with 3µM SPHINX31

File Name: Supplementary Data 6

Description: Total and differential peaks identified in THP-1 cells after BRD4S-to BRD4L isoform

switching using gRNA compared to empty control

File Name: Supplementary Data 7

Description: Overlapping loci illustrating MLL-AF9 recruitment and BRD4 eviction after BRD4S-to

BRD4L isoform switching