

## Description of Additional Supplementary Files

File Name: Supplementary Data 1

Description: **Gene ranking and sgRNA read counts for the CRISPR knockout screen for olaparib sensitivity in wildtype cells.** All genes targeted by the library are ranked according to the MAGeCK negative selection score. The individual sgRNA sequences, their scores, and the read counts in each of the replicate screens are also presented.

File Name: Supplementary Data 2

Description: **Gene ranking and sgRNA read counts for the CRISPR knockout screen for olaparib resistance in BRCA2<sup>KO</sup> cells.** All genes targeted by the library are ranked according to the MAGeCK positive selection score. The individual sgRNA sequences, their scores, and the read counts in each of the replicate screens are also presented.

File Name: Supplementary Data 3

Description: **Gene ranking and sgRNA read counts for the CRISPR activation screen for olaparib resistance in BRCA2<sup>KO</sup> cells.** All genes targeted by the library are ranked according to the MAGeCK positive selection score. The individual sgRNA sequences, their scores, and the read counts in each of the replicate screens are also presented.