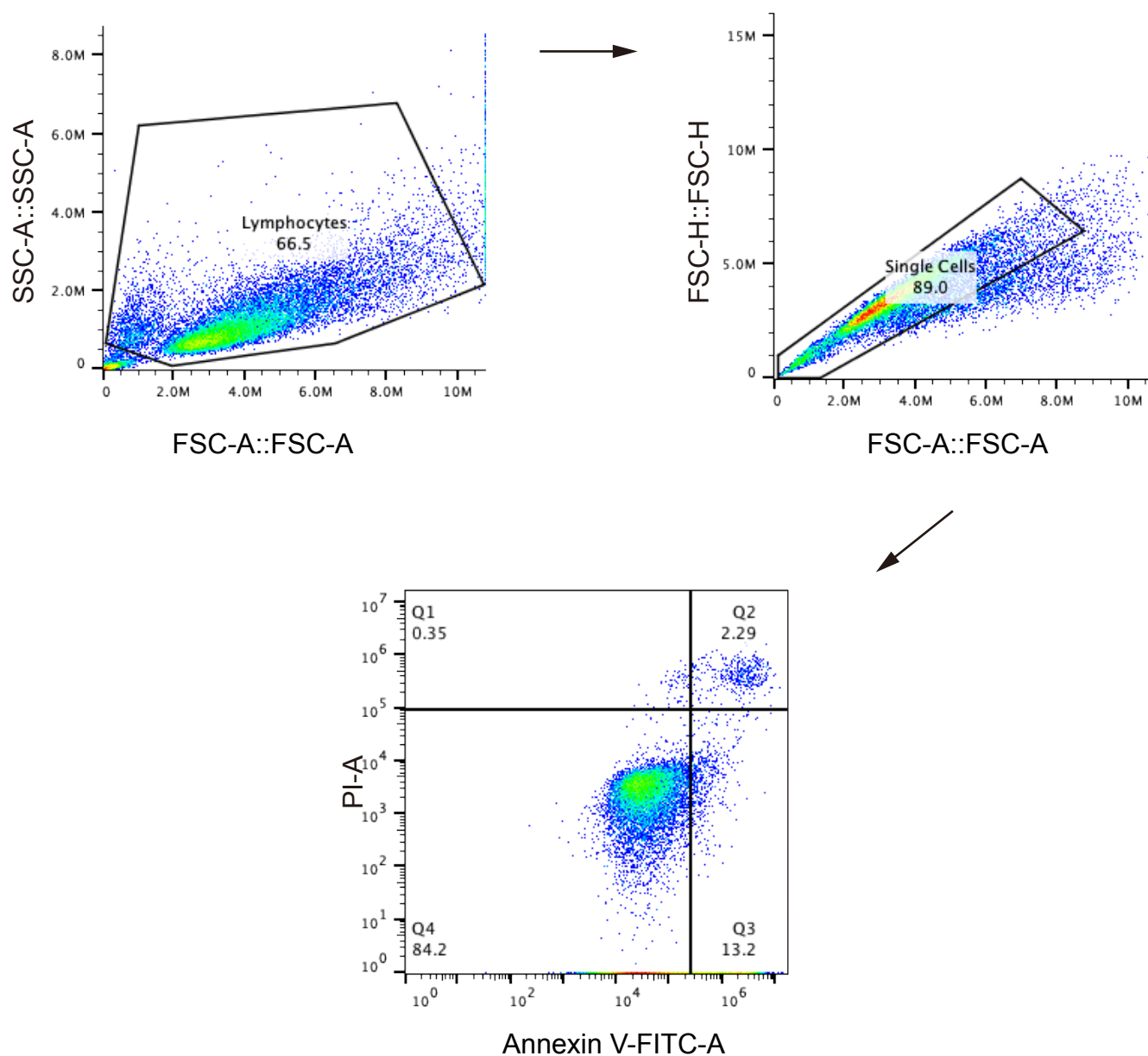


## Supplementary Fig. 1



**Supplementary Fig. 1 Gating strategy for analysis of cell apoptosis.** Gating strategy for FACS-sorting of cancer cell lines treated under different conditions. Total cells were initially gated to exclude debris with FSC-A versus SSC-A. Cells were gated on single cells using FSC-A versus FSC-H, and the resulting data were used for PI and Annexin V sorting to make the subsequent gates. All samples in the same experiments and comparisons were gated with the same parameters.

**Supplementary Table 1 Plasmids used in this study**

| Plasmids                            | Parental plasmids   | Description                                          | Cloning sites        |
|-------------------------------------|---------------------|------------------------------------------------------|----------------------|
| pLVX- <i>KHK-C</i> -puro            | pLVX-puro           | pLVX-puro harboring <i>KHK</i> gene                  | <i>EcoRI/NotI</i>    |
| pET28a-2His- <i>KHK</i>             | pET28a-2His         | pET28a-2His harboring <i>KHK</i> gene                | <i>BamHI/HindIII</i> |
| pLVX-CRISPR-v2- <i>SLC2A5</i> -puro | pLVX-CRISPR-v2-puro | pLVX-CRISPR-v2-puro bearing <i>SLC2A5</i> guide RNAs | <i>BsmBI</i>         |
| pLVX-CRISPR-v2- <i>KHK</i> -puro    | pLVX-CRISPR-v2-puro | pLVX-CRISPR-v2-puro bearing <i>KHK</i> guide RNAs    | <i>BsmBI</i>         |
| psPAX.2                             | psPAX.2             | For lentivirus transfection                          | --                   |
| pMD2.G                              | pMD2.G              | For lentivirus transfection                          | --                   |

**Supplementary Table 2 Guide RNA sequences**

| Gene name     | Direction | Sequence of guide RNA      |
|---------------|-----------|----------------------------|
| <i>SLC2A5</i> | Forward   | 5'-GATGCGCTCGCTGCGCTGGC-3' |
|               | Reverse   | 5'-GCCAGCGCAGCGAGCGCATC-3' |
| <i>KHK</i>    | Forward   | 5'-GGTGCTGGACGTCATCAGCC-3' |
|               | Reverse   | 5'-GGCTGATGACGTCCAGCACC-3' |

**Supplementary Table 3 Primers for quantitative real-time PCR**

| Gene name | Direction | Sequence             |
|-----------|-----------|----------------------|
| HO-1      | Forward   | GGTCAGGTGTCCAGAGAAGG |
|           | Reverse   | CTTCCAGGGCCGTGTAGATA |
| NQO1      | Forward   | ATCCTGCCGAGTCTGTTCTG |

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|                |         |                      |
|----------------|---------|----------------------|
|                | Reverse | AGGGACTCCAACCACTGC   |
| GCLC           | Forward | GTGGACGAGTGCAGCAAG   |
|                | Reverse | GTCCAGGAAATACCCCTTCC |
| PGD            | Forward | AAAGATCCGGGACAGTGCT  |
|                | Reverse | CACCGAGCAAAGACAGCTT  |
| KHK-A          | Forward | TATTCTGTGGACCTACGCTA |
|                | Reverse | CATAGTATAGGATGGTGCGG |
| KHK-C          | Forward | CATGTTGCTGACTTCCTGG  |
|                | Reverse | TTGGAGTTGTTGATGATGCA |
| GAPDH          | Forward | GAGTCAACGGATTGGTCGT  |
|                | Reverse | TTGATTTTGGAGGGATCTCG |
| $\beta$ -actin | Forward | CATCACCATCTTCCAGGAG  |
|                | Reverse | AGGCTGTTGTCATACTTCTC |

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