**Table S1.** The basic information of samples in the 12 public datasets.

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| --- | --- | --- | --- |
| **Dataset** | **Sample size** | **Platform** | **Data type** |
| TCGA-STAD | 375 | High-throughput sequencing  | mRNA data, CNV data, Mutation data |
| ACRG  | 300 | Microarray | mRNA data, CNV data |
| GSE15459 | 192 | Microarray | mRNA data |
| GSE57303 | 70 | Microarray | mRNA data |
| GSE34942 | 56 | Microarray | mRNA data |
| GSE38749 | 15 | Microarray | mRNA data |
| GSE29272 | 134 | Microarray | mRNA data |
| GSE84437 | 433 | Microarray | mRNA data |
| GSE26901 | 109 | Microarray | mRNA data |
| GSE26899 | 96 | Microarray | mRNA data |
| GSE13861 | 65 | Microarray | mRNA data |
| GSE28541 | 40 | Microarray | mRNA data |