

Supplementary Table S2. Active compounds against esophageal cancer.

| Number | Name | Target | Cell Viability (100%) |
|---------------|-------------------------------|------------------------------------|------------------------------|
| 1 | Defactinib (VS-6063) | FAK inhibitor | 62.19 |
| 166 | Triapine | DNA/RNA Synthesis inhibitor | 61.49 |
| 808 | Epetraborole hydrochloride | Antibacterial inhibitor | 61.49 |
| 188 | LY-2874455 | FGFR inhibitor; VEGFR inhibitor | 59.76 |
| 455 | CH5183284 (Debio-1347) | FGFR inhibitor | 59.07 |
| 845 | Acelarin | DNA/RNA Synthesis inhibitor | 58.55 |
| 370 | STF-31 | transporter inhibitor | 58.47 |
| 325 | Ascomycin (FK520) | phosphatase inhibitor | 57.66 |
| 276 | Afuresertib | Akt inhibitor | 56.27 |
| 286 | NLG919 | IDO inhibitor | 55.62 |
| 783 | AS-8351 | Others inhibitor | 55.46 |
| 299 | CHS 828 | NAMPT inhibitor | 54.51 |
| 561 | CDDO (Bardoxolone) | Nrf2 inhibitor | 53.02 |
| 240 | Selumetinib (AZD6244) | MEK inhibitor | 50.41 |
| 239 | 2-Amino-6-mercaptopurin | DNA Methyltransferase inhibitor | 50.31 |

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|-----|----------------------------------|-----------------------------------------------------------|-------|
| 271 | Picropodophyllin (PPP) | Adenosine Receptor antagonist; Aurora Kinase inhibitor | 48.98 |
| 254 | Obatoclax Mesylate (GX15-070) | Bcr-Abl antagonist | 41.69 |
| 159 | YM155 | Survivin inhibitor | 29.28 |
| 6 | Epirubicin hydrochloride | Topoisomerase inhibitor | 15.27 |
| 726 | Halofuginone hydrobromide | Others inhibitor | 7.37 |
| 460 | Verdinexor (KPT-335) | XPO1 inhibitor | 2.30 |

Supplementary Table S3. Primers used for qPCR analyses.

| Gene name | Sequences | |
|-----------|-----------------------|-------------------------|
| | Forward Primer | Reverse Primer |
| FOSL1 | CAGGCGGAGACTGACAAACTG | TCCTCCGGGATTTGCAGAT |
| GAPDH | GGAGCGAGATCCCTCCAAAAT | GGCTGTTGTCATACTTCTCATGG |

Supplementary Table S4. The sequences of siRNAs used in knockdown experiments.

| Gene name | Sequences | |
|------------------|-----------------------|------------------------|
| | sense (5'-3') | antisense (5'-3') |
| FOSL1-homo-1210 | CUAGCACAAUUGCACUAATT | UUAGUGCAAUUGUGCUAGTT |
| FOSL1-homo-301 | GCCAAGCAUCAACACCAUGTT | CAUGGUGUUGAUGCUUGGCTT |
| FOSL1-homo-926 | GCUCAUCGCAAGAGUAGCATT | UGCUACUCUUGCGAUGAGCTT |
| c-Myc-homo-1344 | GAGGAUAUCUGGAAGAAUUTT | AUUUCUUC CAGAUAUCCUCTT |
| c-Myc-homo-1729 | GCUUGUACCUGCAGGAUCUTT | AGAUC CUGCAGGUACAAGCTT |
| c-Myc-homo-1982 | GGAAGAAAUCGAUGUUGUUTT | AACAACAUCGAUUUCUUCCTT |
| Negative control | UUCUCCGAACGUGUCACGUTT | ACGUGACACGUUCGGAGAATT |