

Figure S1

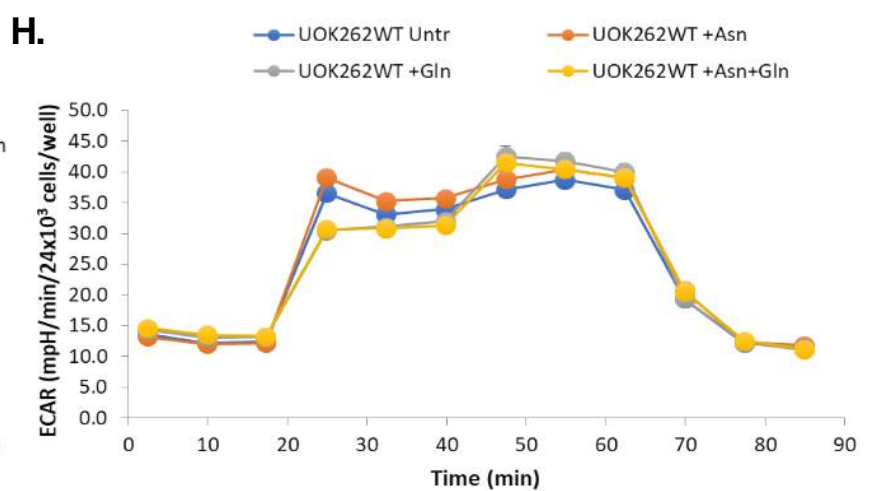
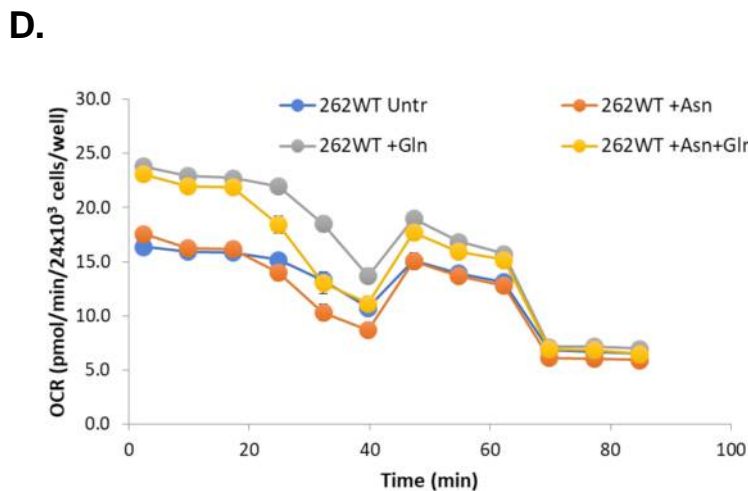
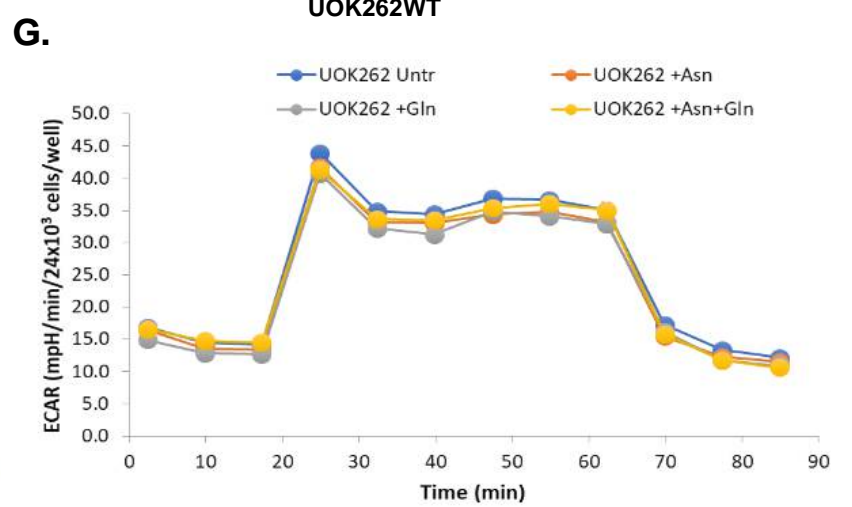
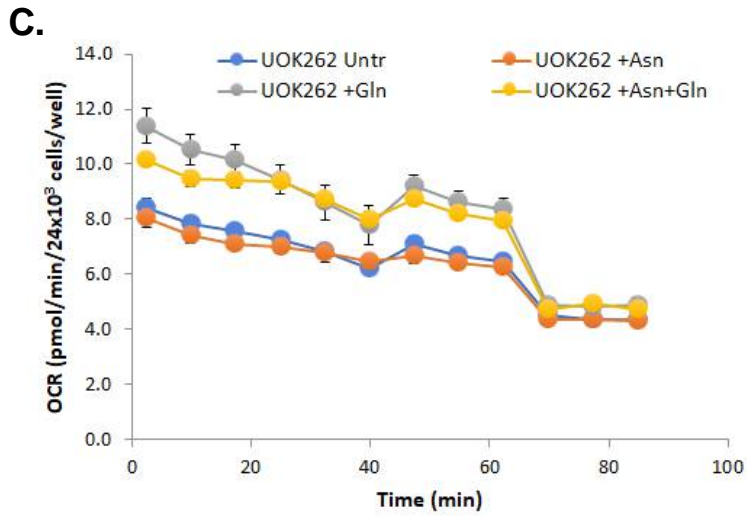
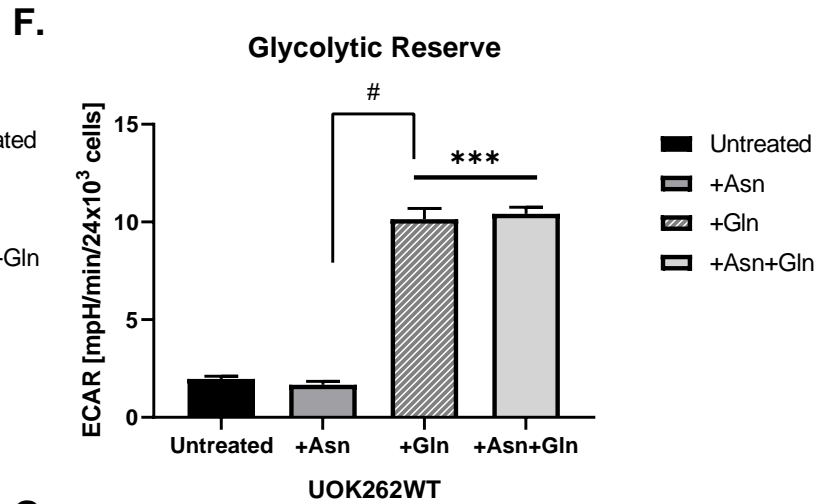
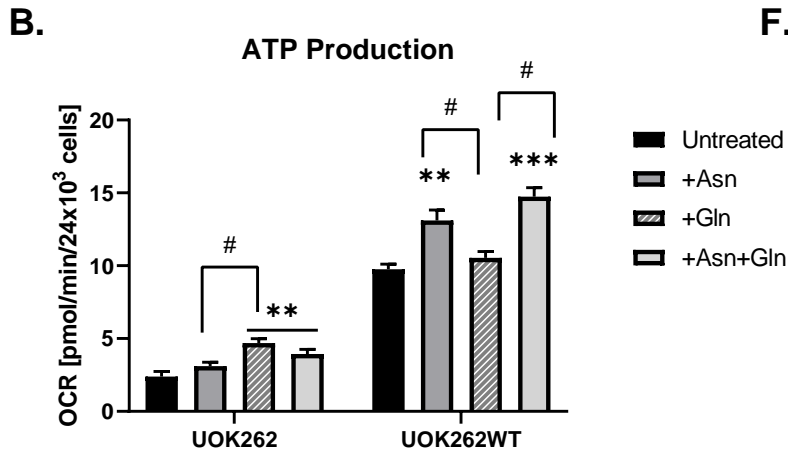
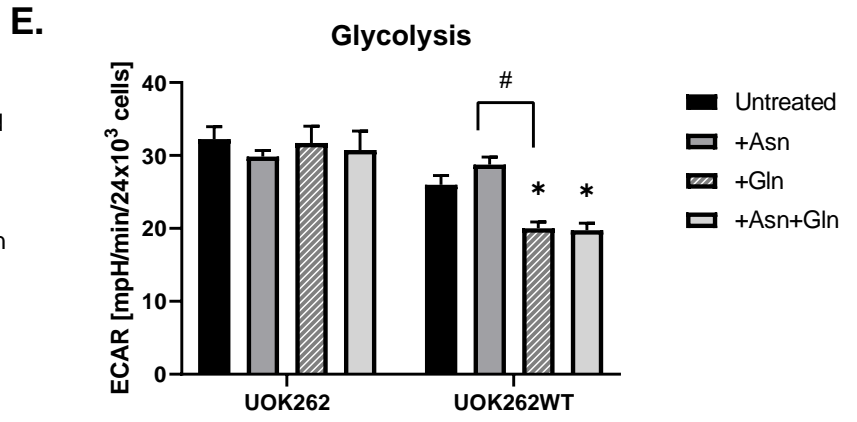
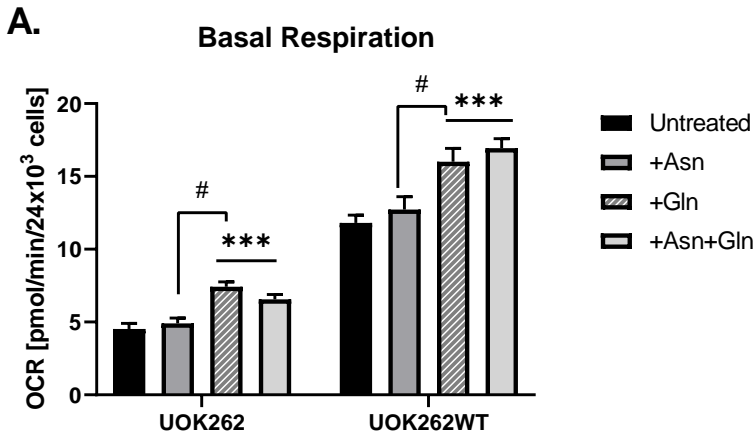
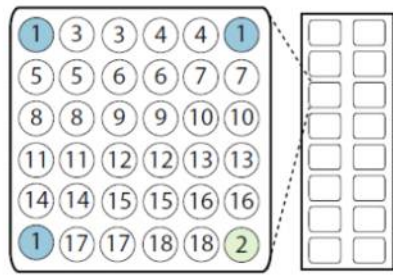
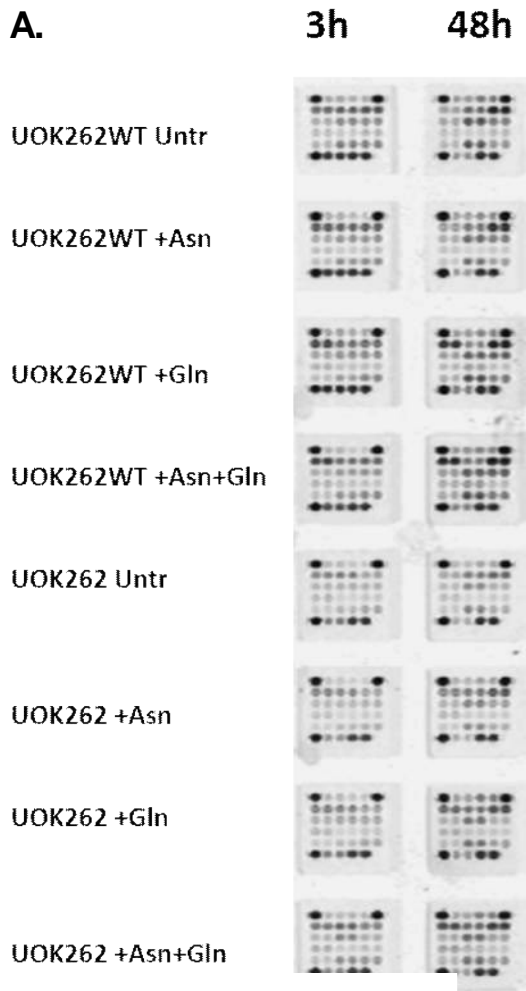
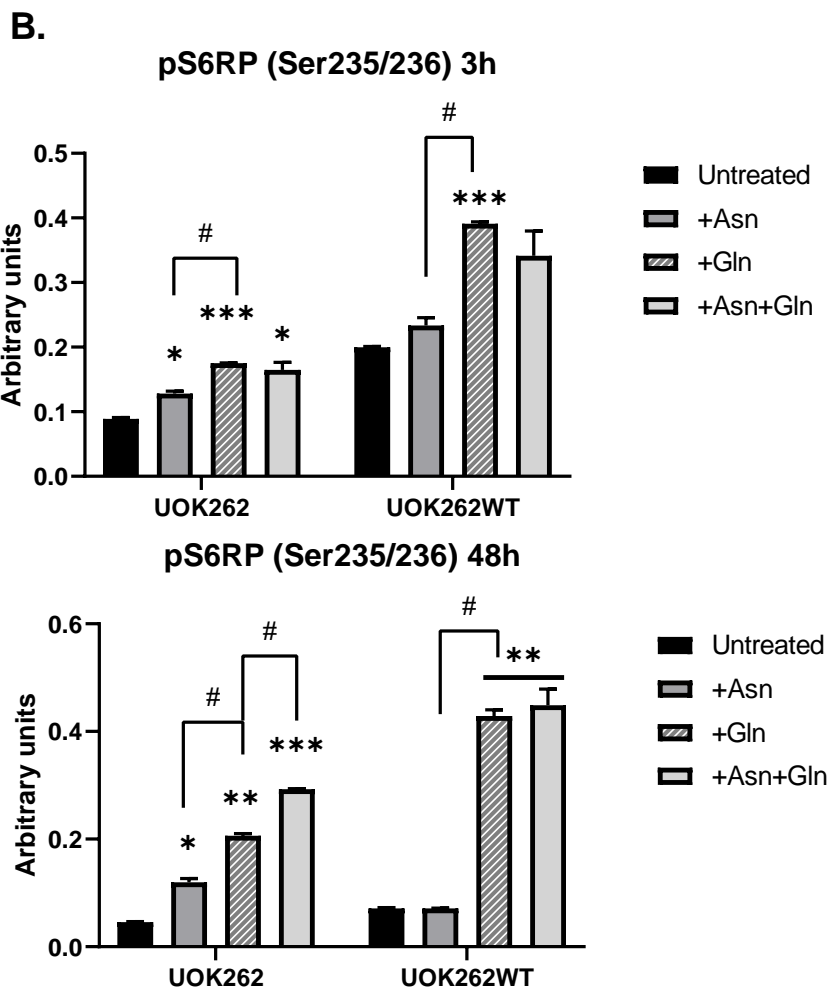


Figure S2



Akt Signaling

Target	Phosphorylation Site
1 Positive Control	N/A
2 Negative Control	N/A
3 Akt	Thr308
4 Akt	Ser473
5 S6 Ribosomal Protein	Ser235/236
6 AMPK α	Thr172
7 PRAS40	Thr246
8 mTOR	Ser2481
9 GSK-3 α	Ser21
10 GSK-3 β	Ser9
11 p70 S6 Kinase	Thr389
12 p70 S6 Kinase	Thr421/Ser424
13 Bad	Ser112
14 RSK1	Ser380
15 PTEN	Ser380
16 PDK1	Ser241
17 Erk1/2	Thr202/Tyr204
18 4E-BP1	Thr37/46



C.

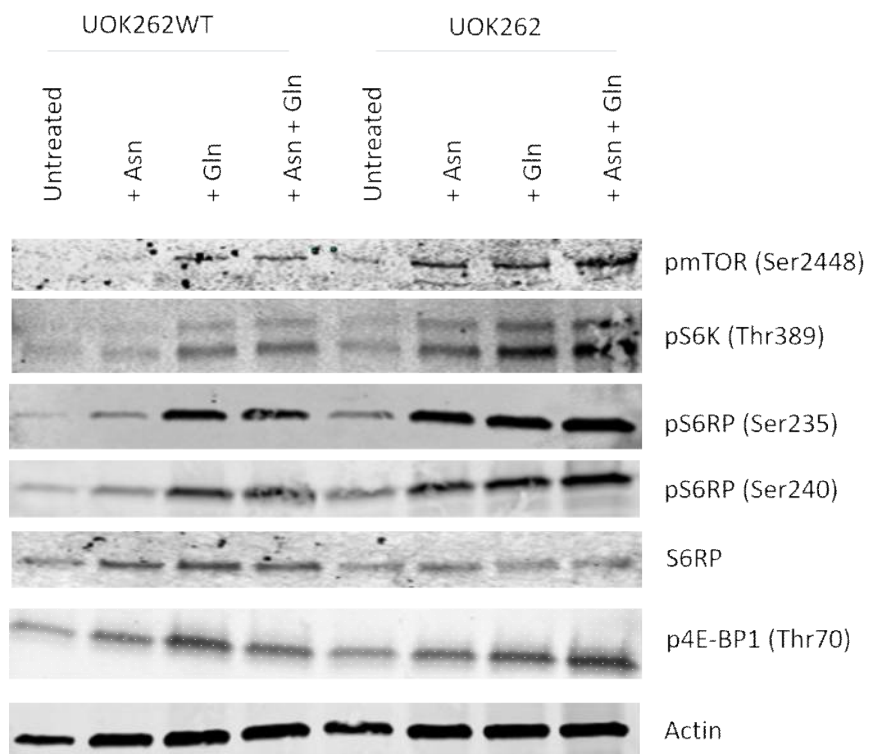


Figure S3

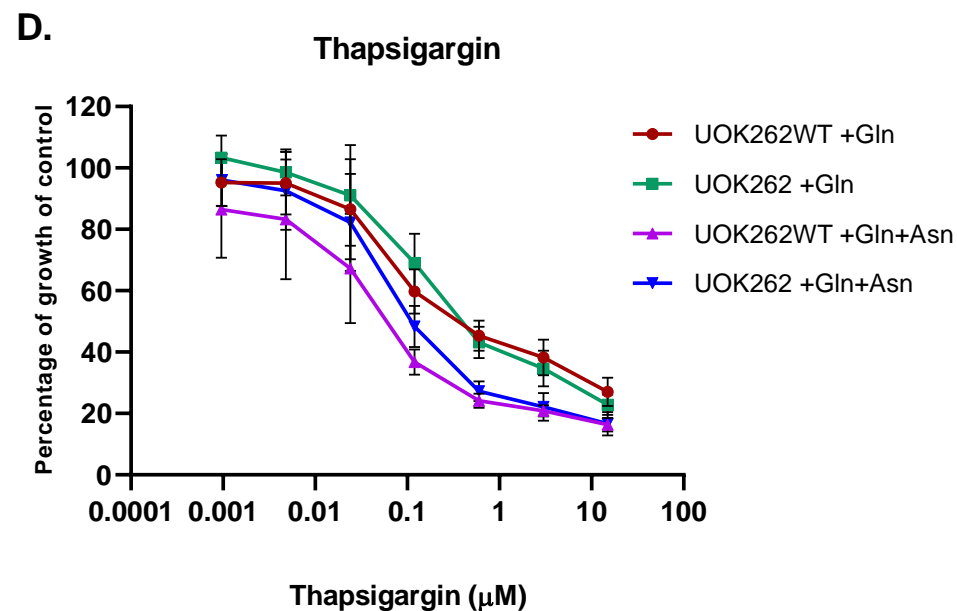
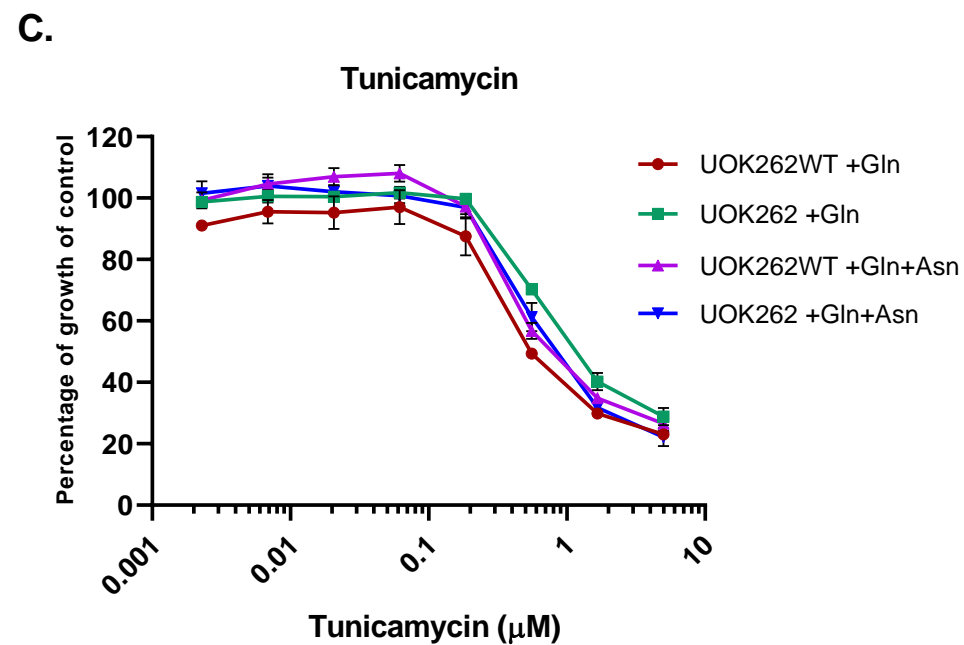
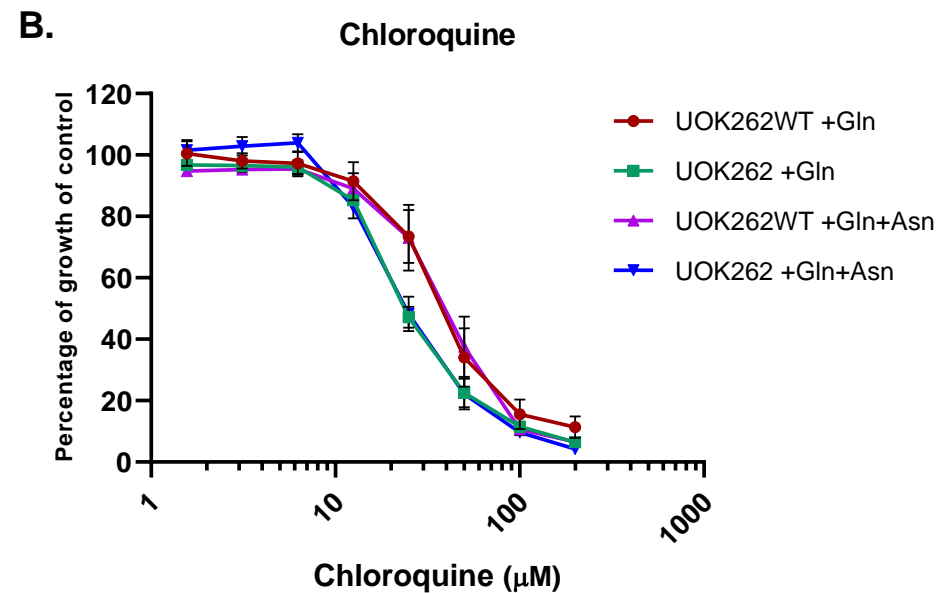
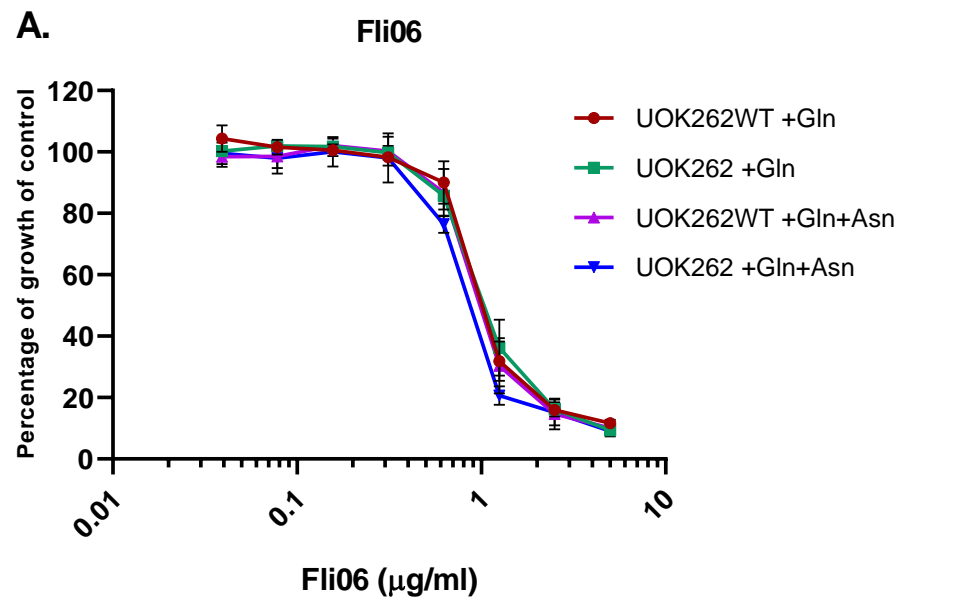


Figure S4

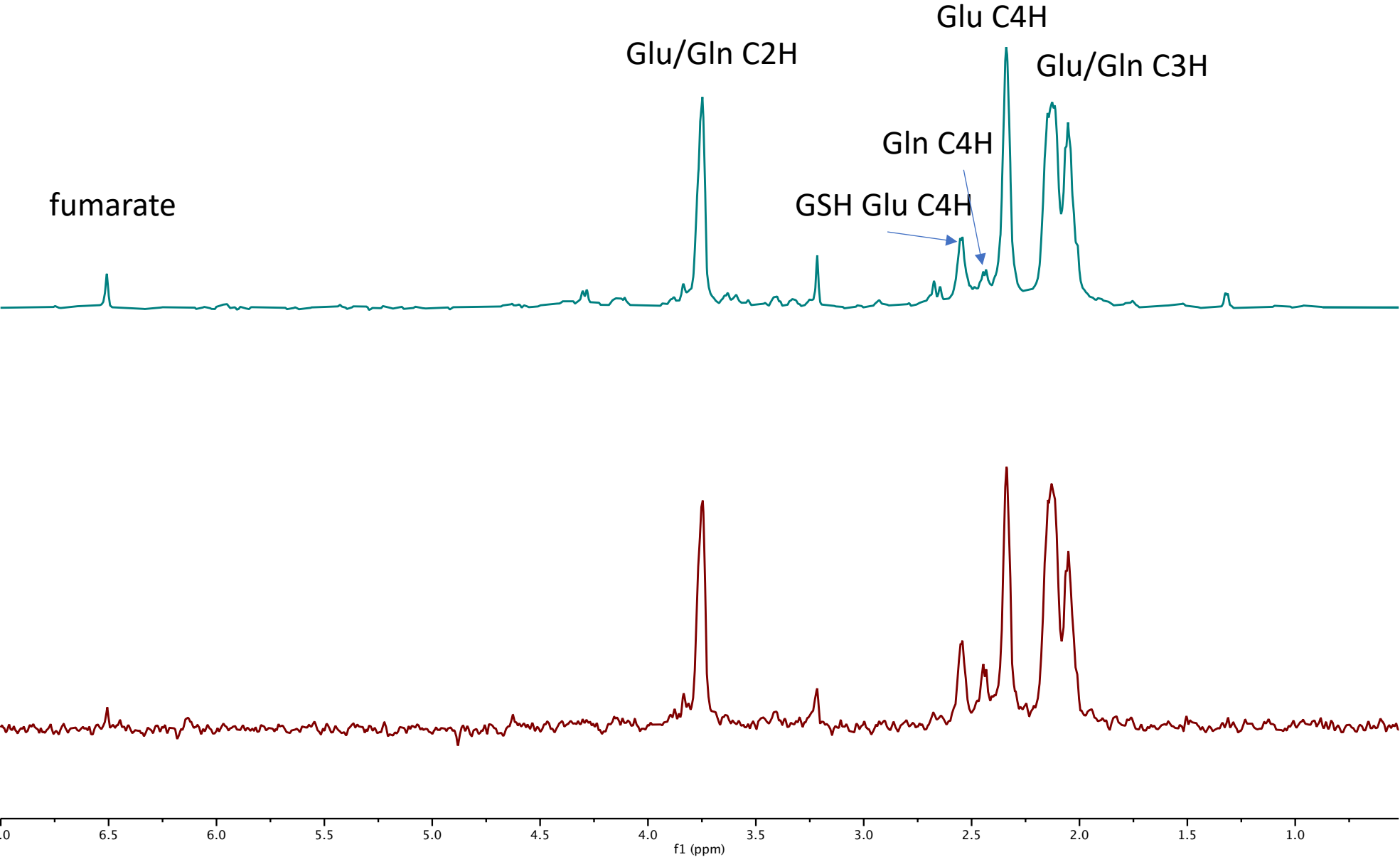


Table S1

Upregulated by Asn+Gln but not Asn or Gln	HSP90B1 GDF15 ZFP36L1 NDRG1 SLC20A1 SLC2A1 PHLDA1 GPRC5A LIMA1 BHLHE40 MCL1 DUSP1 PPP1R15 CSNK1E SAT1 HERPUD1 TNFSF9 TGFB1 HMGCS1 ACSL4 TM4S1 FDFT1 LIF JUND PPP1R15B DNAJB1 RABGAP1L UBC BTG1 HIST1H1C JUNB GABA RAPL1 ADM COLEC10 F3 HSPA5 DDIT3 KLF6
Downregulated by Asn+Gln but not Asn or Gln	MT-ND2 TAGLN NDST1 EIF3A MDM2 FUS MAT2A SFPQ MICALL1 NPLOC4 ABCA3 HNRNPM SPRR2A SUPT16H SMARCC1 NOP56 CAD MEGF8 ANKRD52 CBX6 SLC35A4 TAF15 SCRIB SH3BP5L MAPKAP1 STARD7 C15orf52 SETD7 IFI16 RCAN1 OBSCN CUL3 MT- ND1 CSK EIF5
Upregulated by Asn and Gln but not Asn+Gln	SAA2 STAT1 PDZK1IP1 FSTL1 GSN ANXA4 TMEM2 DHCR24 IDH2 HAVCR1 SAA1
Downregulated by Asn and Gln but not Asn+Gln	WARS PSAT1 PPP1R15A ARHGEF2 ASNS HIST1H2AC STC2 UPP1 G0S2