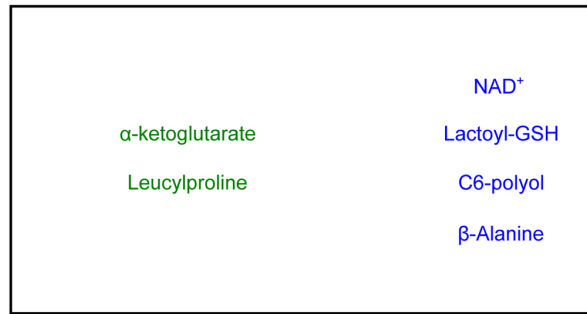
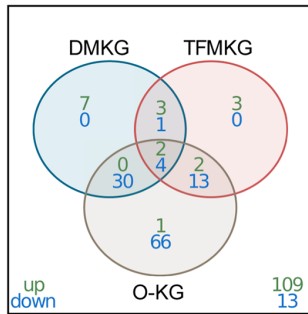


SUPPLEMENTARY FIGURES

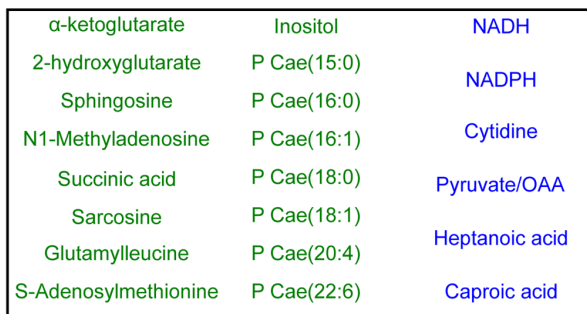
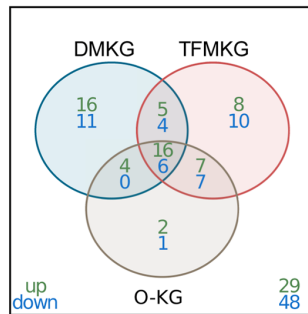
A

Complete Medium



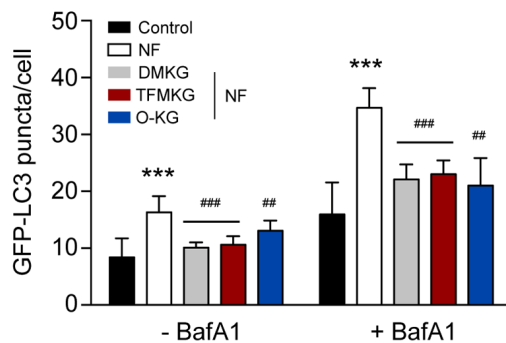
B

Nutrient free

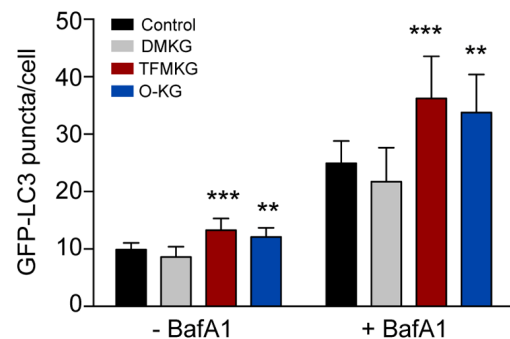


Supplementary Figure 1 (related to Figure 1). Shared vs. private effects of α-ketoglutarate precursors on intracellular metabolome. Venn diagrams depicting the number of metabolites (FDR < 0.1) up- or down- regulated upon administration of α-ketoglutarate precursors in complete medium (A, left panel) or nutrient free medium (B, left panel). Metabolites that are convergently modulated (p < 0.05) by the three compounds are indicated in A and B (right panels).

A



B



Supplementary Figure 2 (related to Figure 2). Modulation of autophagy by α-ketoglutarate precursors in H4 cells. (A) Inhibition of starvation-induced autophagy by DMKG, TFMKG and O-KG. H4 cells stably expressing the autophagic markers GFP-LC3 were incubated in HBSS medium (NF) and left untreated or incubated with α-ketoglutarate precursors. Co-treatment with Bafilomycin A1 (BafA1) was used to assess autophagic flux. Data represent mean ± S.D. (one representative experiment, n=3). *** p < 0.001 compared to Control; ### p < 0.001, # p < 0.01 compared to NF (unpaired t test). (B) Induction of autophagy by TFMKG and O-KG, but not DMKG, in complete medium. ** p < 0.01, *** p < 0.001 compared to Control (unpaired t test).