

B

Outlier kinase genes in LC			Outlier kinase genes in BC		
Only modified Tukey's fences	Both	Only COPA	Only modified Tukey's fences	Both	Only COPA
ACVR1C, CDKL2, EPHA7, EPHB1, EPHB6, ERN2, KSR2, MYO3B, NRK, RET, SGK2, STK32B, WNK4	BRDT, CDK4, GUCY2C	CAMKV, CDKL4, EPHA5, EPHA8, GRK1, MAPK9, MOS, MYT1	BMPR1B, DCLK1, EPHB6, FGFR4, FLT3, LRRK2, MYO3B, MYT1, NRK, TEX14, WNK3	BRDT, CDK12, ERBB2, RPS6KB1	CAMKV, CDK4, MGC42105, MOS, PDK3, PRKCG, RIOK1, ROS1, STK38L, TLK2, VRK2, YSK4

**S5 Fig.** Outlier kinase genes analyzed by modified Tukey's fences method and cancer outlier profile analysis (COPA). (A) The scheme for outlier analysis based on the cancer outlier profile analysis. (B) Outlier kinase gene list. Cancer-related genes are indicated in bold type.