

Table S1. List of tyrosine kinases in kinase antibody array and ORF library

| Kinases | Kinase antibody array | ORF library |
|-------------|-----------------------|-------------|
| Akt/PKB/Rac | + | + |
| ALK | + | |
| Axl | + | + |
| BLK | | + |
| BMX | | + |
| BTK | | + |
| c-Abl | + | |
| c-Kit/SCFR | + | |
| CLK1 | | + |
| DYRK1B | | + |
| DYRK2 | | + |
| DYRK4 | | + |
| EGFR/ErbB1 | + | |
| EphA1 | + | |
| EphA2 | + | |
| EphA3 | + | |
| EPHA4 | | + |
| EphB1 | + | |
| EphB3 | + | |
| EphB4 | + | |
| FGFR1 | + | + |
| FGFR3 | + | |
| FGFR4 | + | |
| FGR | | + |
| FLT3/Flk2 | + | |
| FRK | | + |
| HCK | | + |
| HER2/ErbB2 | + | |
| HER3/ErbB3 | + | |
| IGF-IR | + | |
| InsR | + | |
| IRS-1 | + | |
| ITK | | + |
| JAK3 | | + |
| Lck | + | + |
| MAP2K5 | | + |

| | | |
|-------------------------|----|----|
| MAP2K6 | | + |
| MAP2K7 | | + |
| MATK | | + |
| M-CSFR/CSF-1R | + | |
| Met/HGFR | + | |
| p44/42 MAPK (ERK1/2) | + | |
| PDGFR | + | |
| PTK2 | | + |
| PTK9L | | + |
| Ret | + | + |
| Ron/MST1R | + | |
| S6 Ribosomal Protein | + | |
| Src | + | |
| Stat1 | + | |
| Stat3 | + | |
| SYK | | + |
| TEC | | + |
| TIE1 | | + |
| Tie2/TEK | + | |
| TNK2 | | + |
| TrkA/NTRK1 | + | |
| TrkB/NTRK2 | + | |
| TrkC/NTRK3 | | + |
| TTK | | + |
| TYK2 | | + |
| Tyro3/Dtk | + | |
| VEGFR2/KDR | + | |
| YES | | + |
| Zap-70 | + | + |
| 65 | 38 | 33 |

Table S2. Percentage of cases with altered tyrosine kinases in various cancer types

| Percent cases altered | Cancer datasets | | | | | | | |
|-----------------------|------------------|-----------------|----------------|---------------------|------------------------|-------------------|----------------|-----------------|
| | Tyrosine kinases | Pancreas (UTSW) | Ovarian (TCGA) | Stomach/ Esophageal | Prostate (FHCRC, 2016) | Breast (METABRIC) | Bladder (TCGA) | Melanoma (TCGA) |
| ErbB2 | 11.90% | 3.90% | 27.50% | 1.50% | 18.30% | 13.40% | 3.10% | 5.20% |
| Tyro3 | 1.80% | 3.90% | 4.50% | 3.70% | 0.50% | 1.60% | 4.20% | 3.50% |
| AXL | 16.50% | 5.50% | 4.90% | 4.40% | 0.50% | 5.50% | 4.90% | 3% |
| EphA2 | 14.70% | 4.20% | 4.90% | 2.90% | 0.10% | 7.90% | 8.40% | 3% |
| FAK | 15.60% | 36.70% | 12.10% | 30.90% | 21.70% | 7.90% | 8% | 7% |
| Total | 60.50% | 54.20% | 53.90% | 43.40% | 41.10% | 36.30% | 28.60% | 21.70% |

<http://www.cbioportal.org/index.do>

Table S3. Cellular glycolytic index of MCF10A sublines (normalized to 10A.pLHCX)

| | 10A.pLHCX | 10A.PKM2 | 10A.Y105F | 10A.Y105D |
|------------------------------|------------------|-----------------|------------------|------------------|
| Glucose uptake (G) | 2481.67 | 2308.00 | 2169.00 | 2369.00 |
| Lactate production (L) | 1.71 | 1.66 | 1.69 | 1.11 |
| Oxygen consumption (O) | 47.37 | 46.42 | 37.86 | 16.75 |
| Glycolytic index (G x L / O) | 89.61 | 82.77 | 96.84 | 157.39 |
| Fold change | 1.00 | 0.92 | 1.08 | 1.76 |