

DigiWest Data Visualization

Mapping of Data on Signal Transduction Pathways

- Changes in activation status of regulatory signal transduction pathways can be visualized by mapping the DigiWest data on pathway maps.
- Visualization of specific changes uses ratios of corresponding samples (e. g. treatment vs control) for color coding.
 - Changes in **site specific phosphorylation** and the **total amount** of protein are shown.

Available antibodies (in blue) for a section of the mTOR signaling pathway

Visualized changes (treatment vs control):
Specific phosphorylation (colored circles)
Total protein (colored boxes)

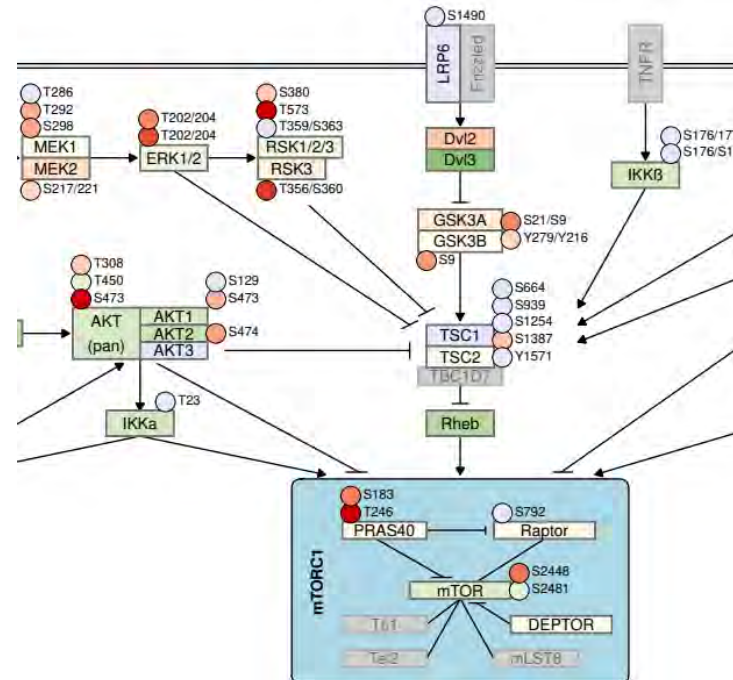
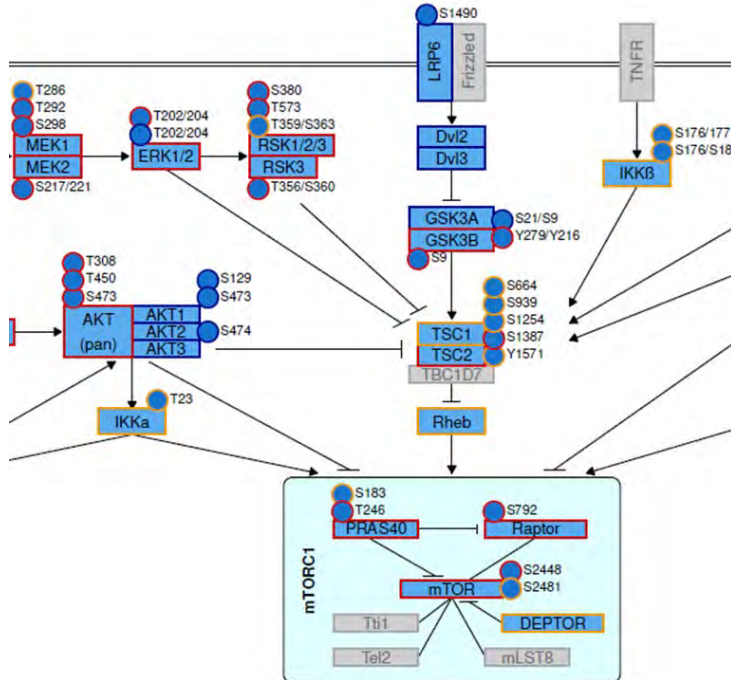
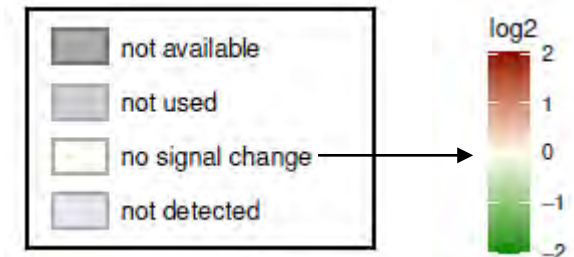


Figure Legend

available antibody



DigiWest Data Analysis

Mapping of Expression Data on Signal Transduction Pathways

Signalling Pathway Maps

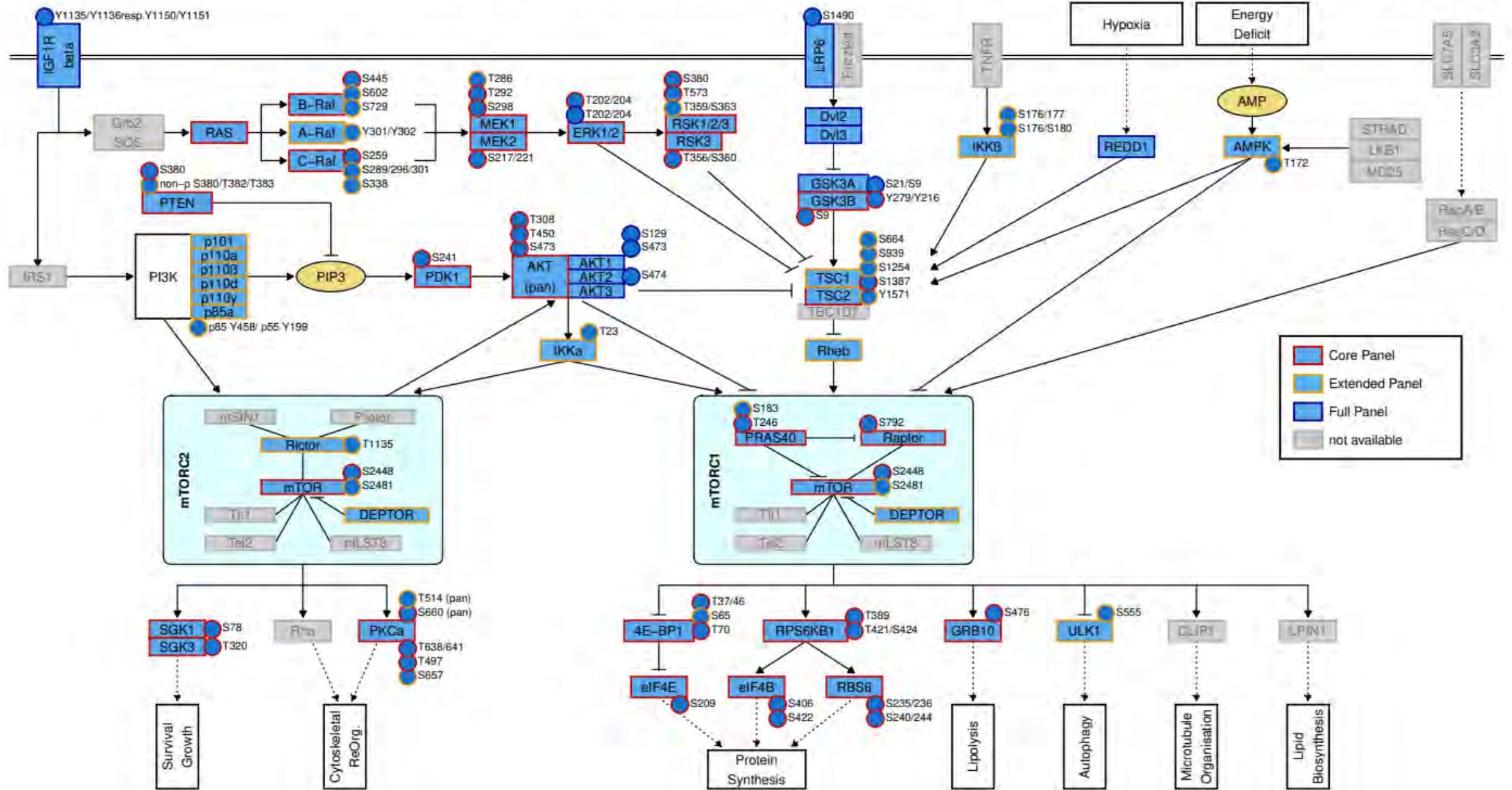
- Pathway maps (adapted from Reactome, Gillespie et al. 2022) include relevant phosphorylation sites
- DigiWest antibodies are mapped onto key signalling pathways and pathway coverage is indicated in the maps

Data Processing:

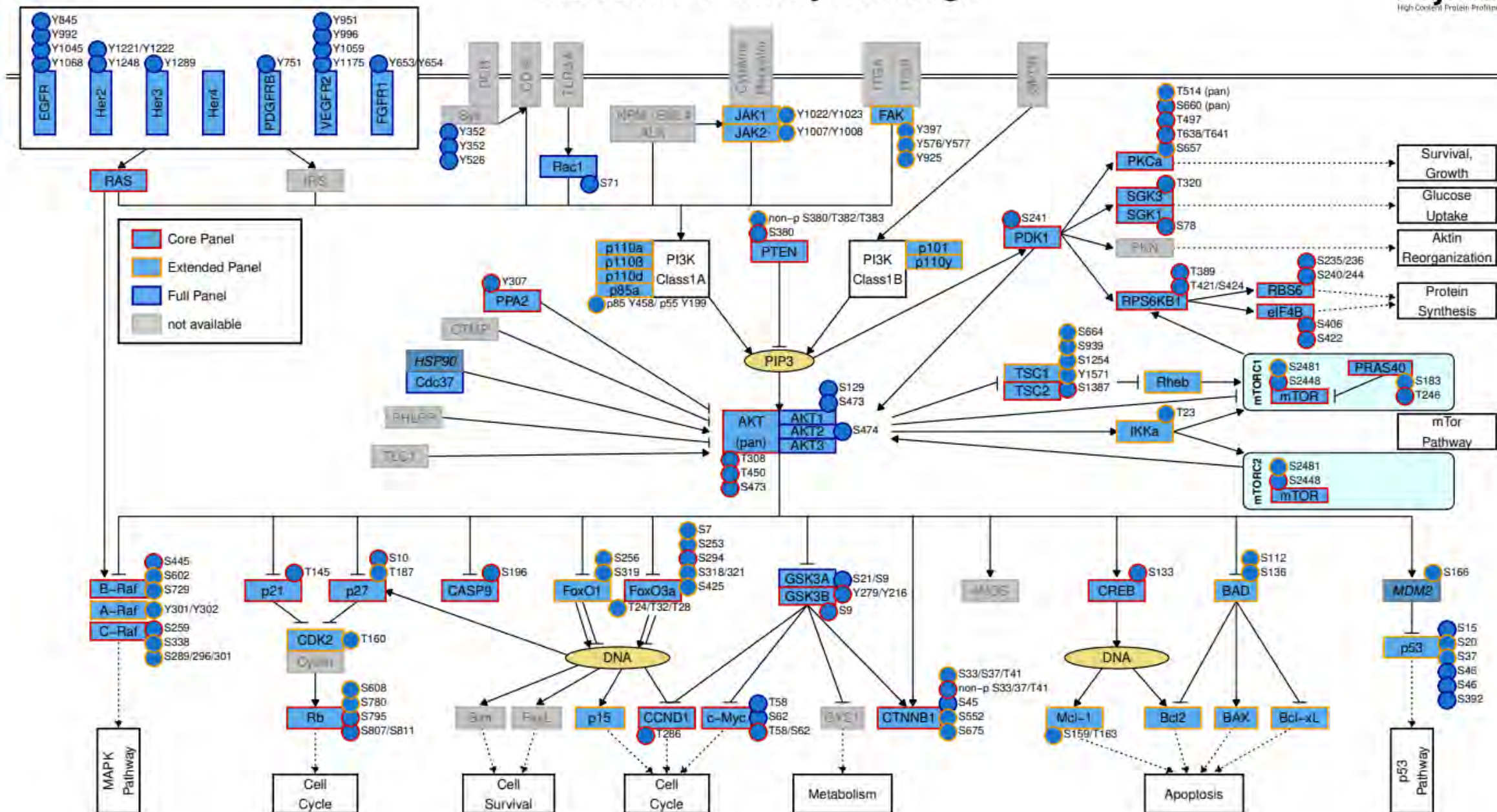
- Ratios of normalized expression values DigiWest experiments (corresponding conditions; e. g. treatment vs control) are used to highlight expression or phosphorylation changes by changes in color
- Modulation of pathway activity directly visible in map

Pathway	Selected Antibodies/ available Antibodies	Used Samples	Calculated Ratio	Pathway Diagrams
EGF/MAPK/RAS	/126	#1123 A431 untreated #1125 A431 EGF treated	A431+EGF vs A431 untreated	A 1 – A 3
PI3K/AKT	/166	#1127 MCF7 untreated #1128 MCF7 hIGF treated	MCF7+IGF vs MCF7 untreated	M 1 – M 3
mTOR	/119			

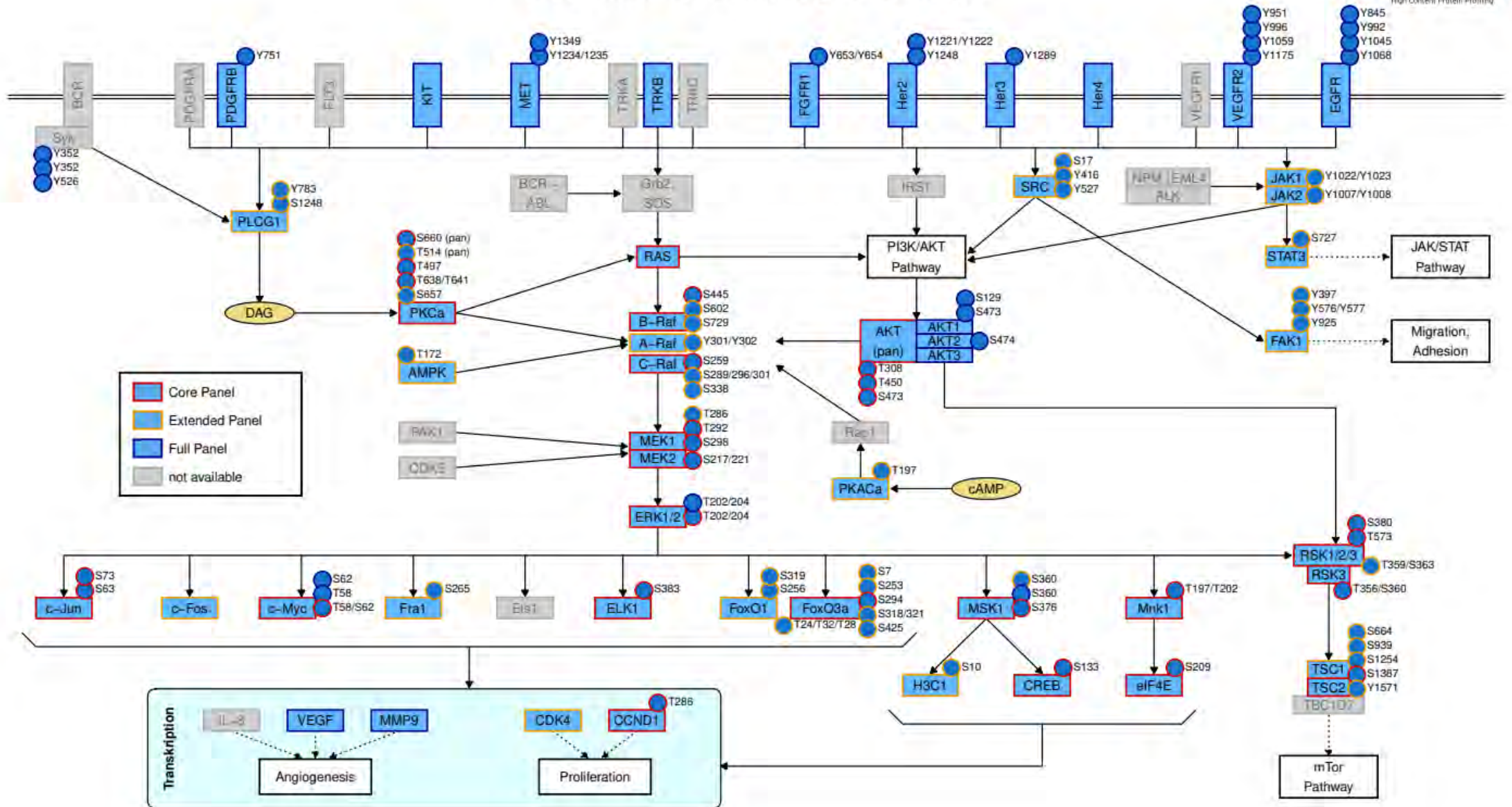
mTOR-Pathway Coverage



PI3K/AKT-Pathway Coverage

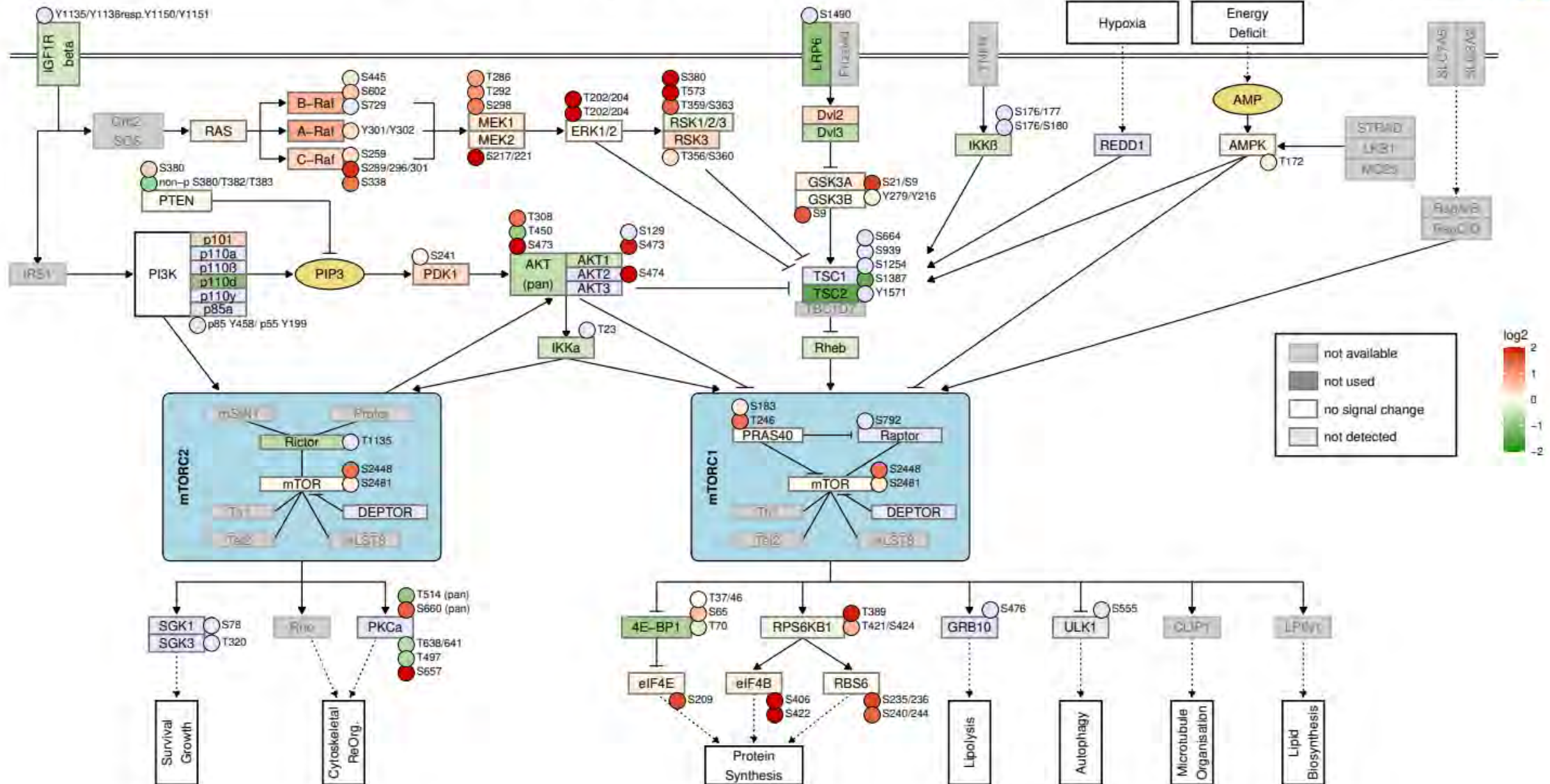


RTK/MAPK-Pathway Coverage

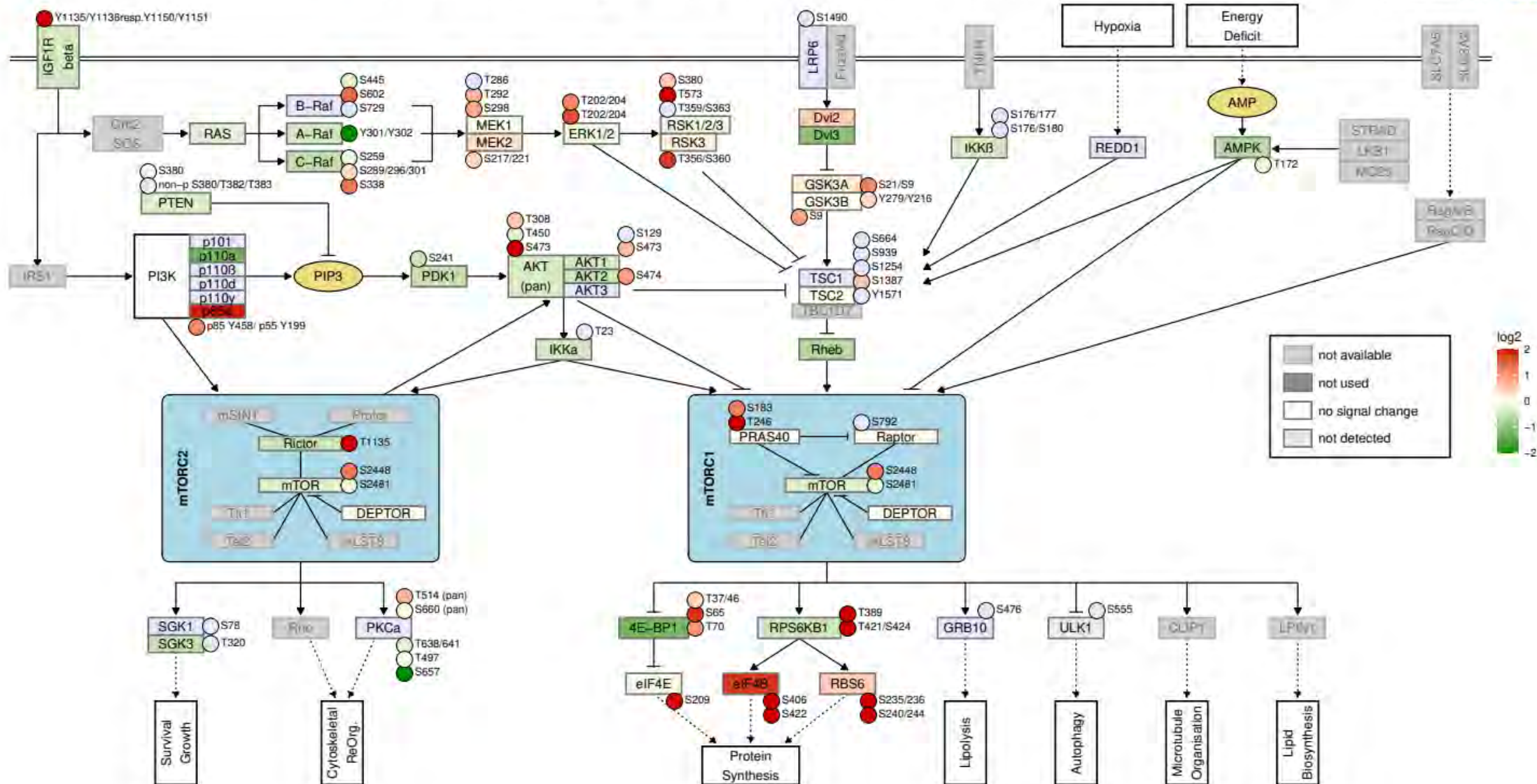


Exemplary Data

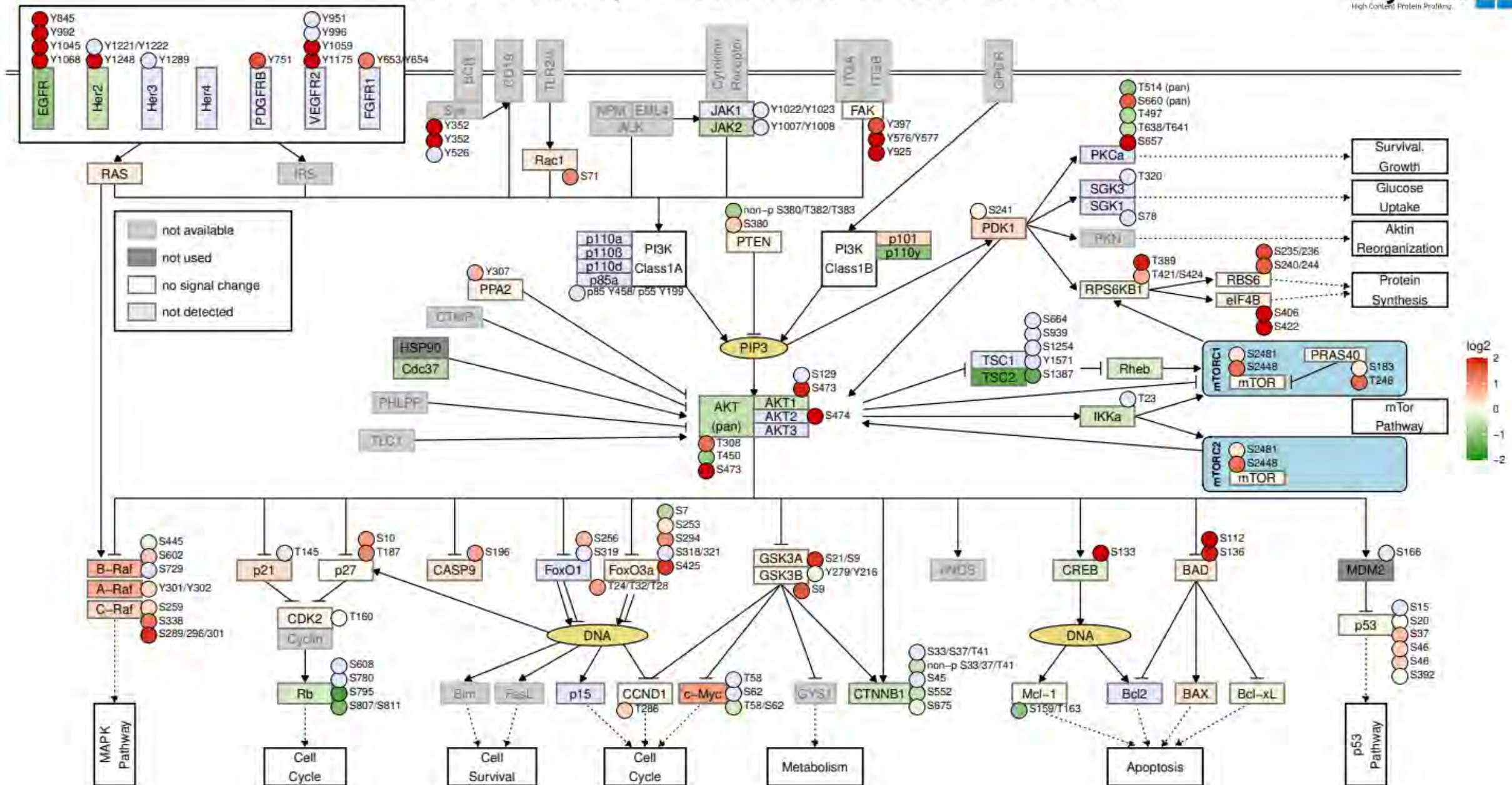
mTOR-Pathway – A431 +EGF vs A431 untreated



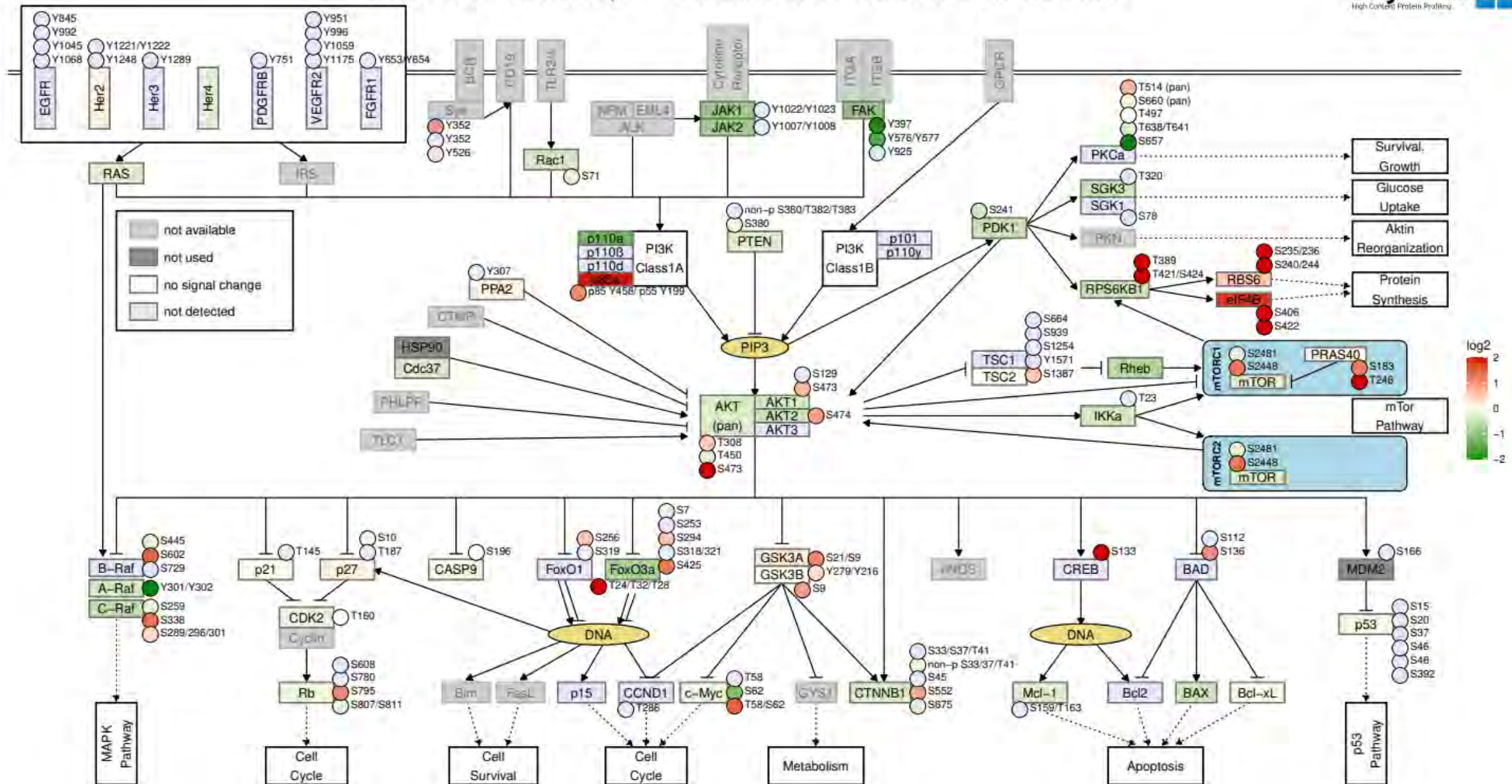
mTOR-Pathway - HeLa +hIGF vs HeLa untreated



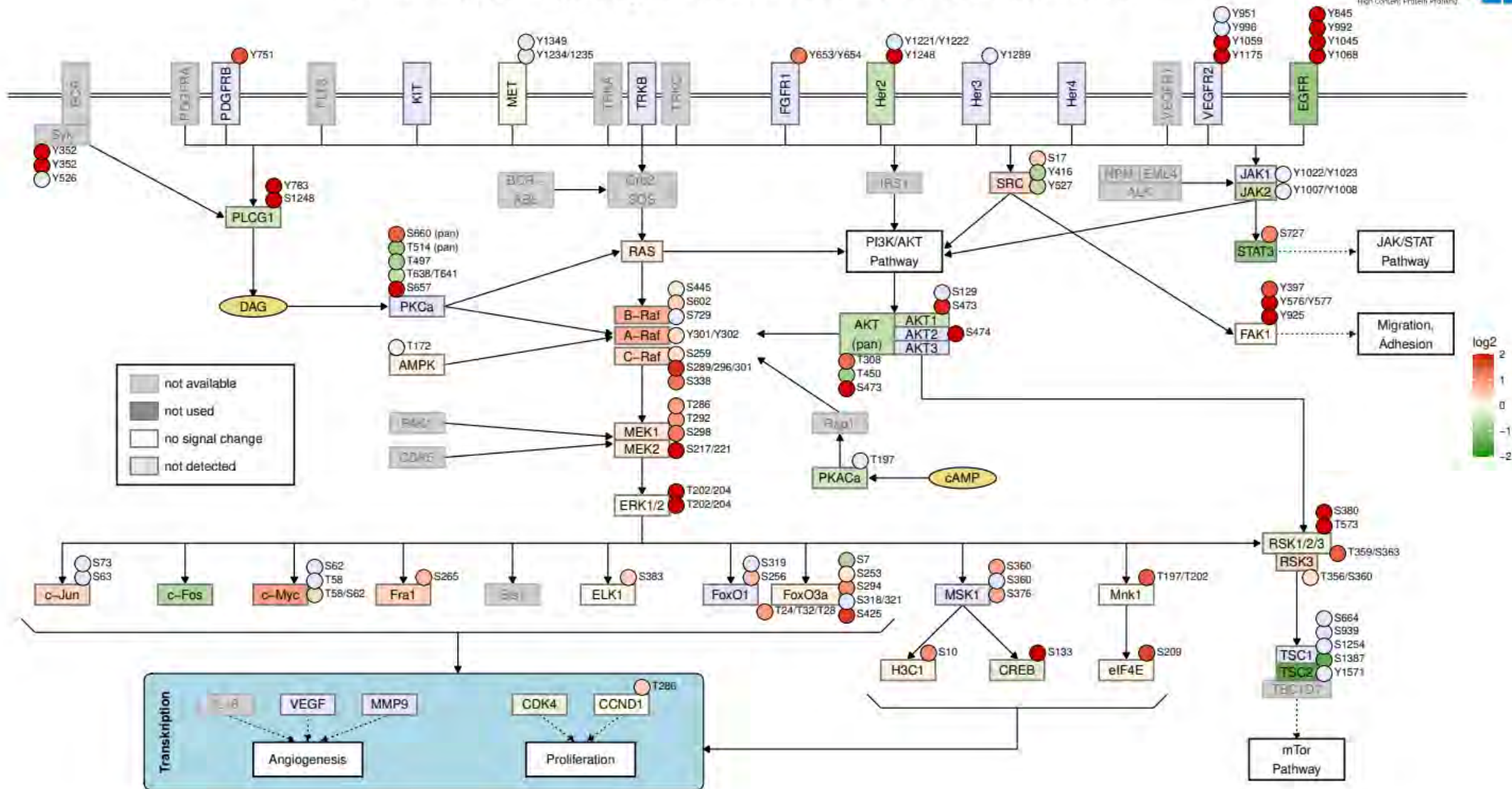
PI3K/AKT-Pathway - A431 +EGF vs A431 untreated



PI3K/AKT-Pathway - HeLa +hIGF vs HeLa untreated



RTK/MAPK-Pathway - A431 +EGF vs A431 untreated



RTK/MAPK-Pathway - HeLa +hIGF vs HeLa untreated

