

PI3K SIGNALING IN HUMAN CANCER

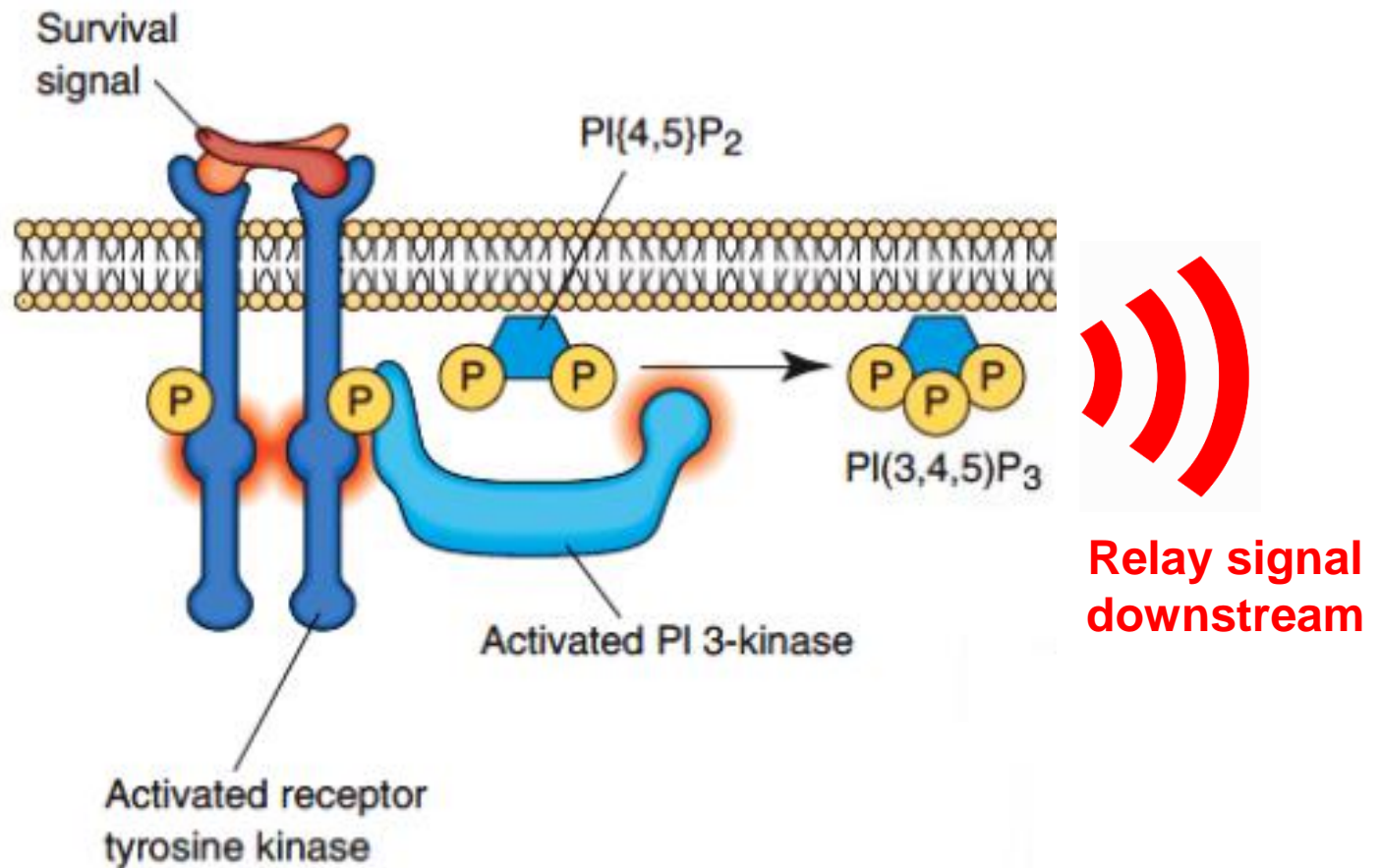
Presented by:

Hadi Salimi

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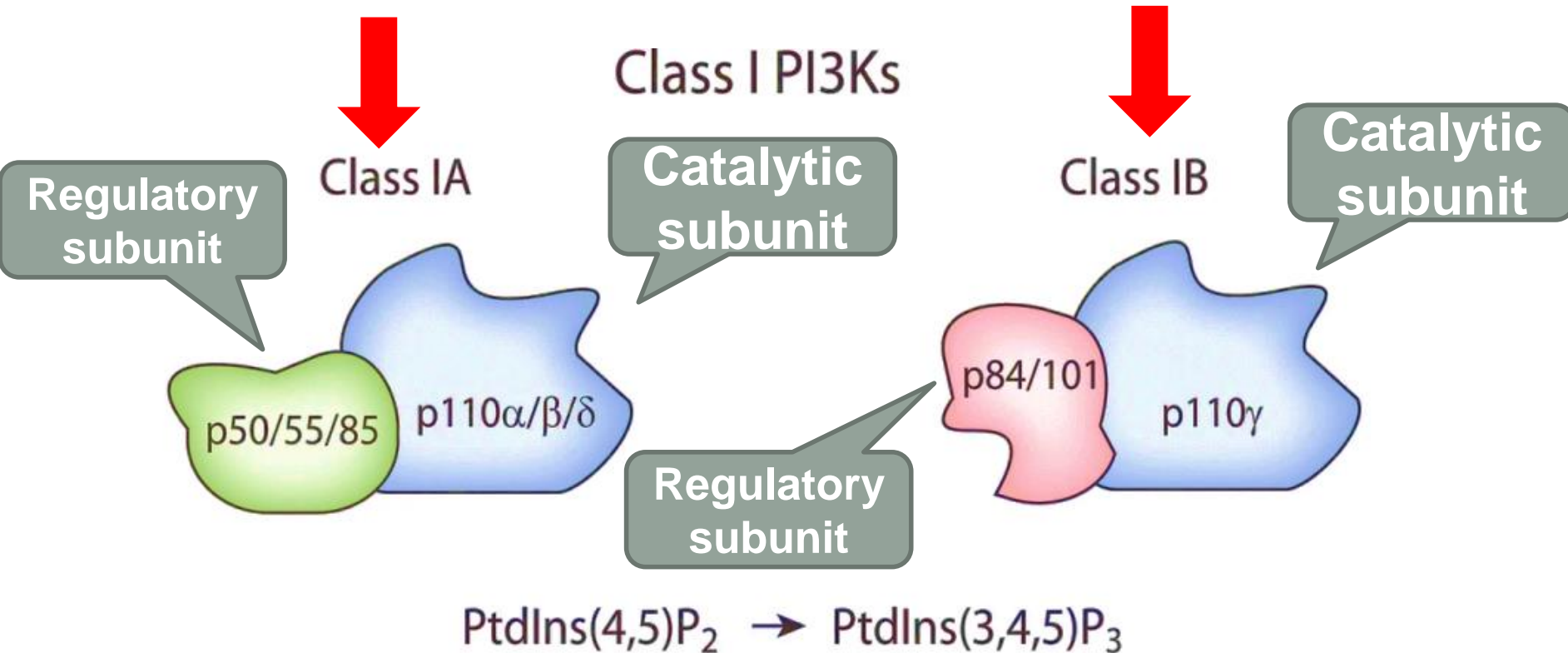
Introduction



PI 3-Kinase Structure

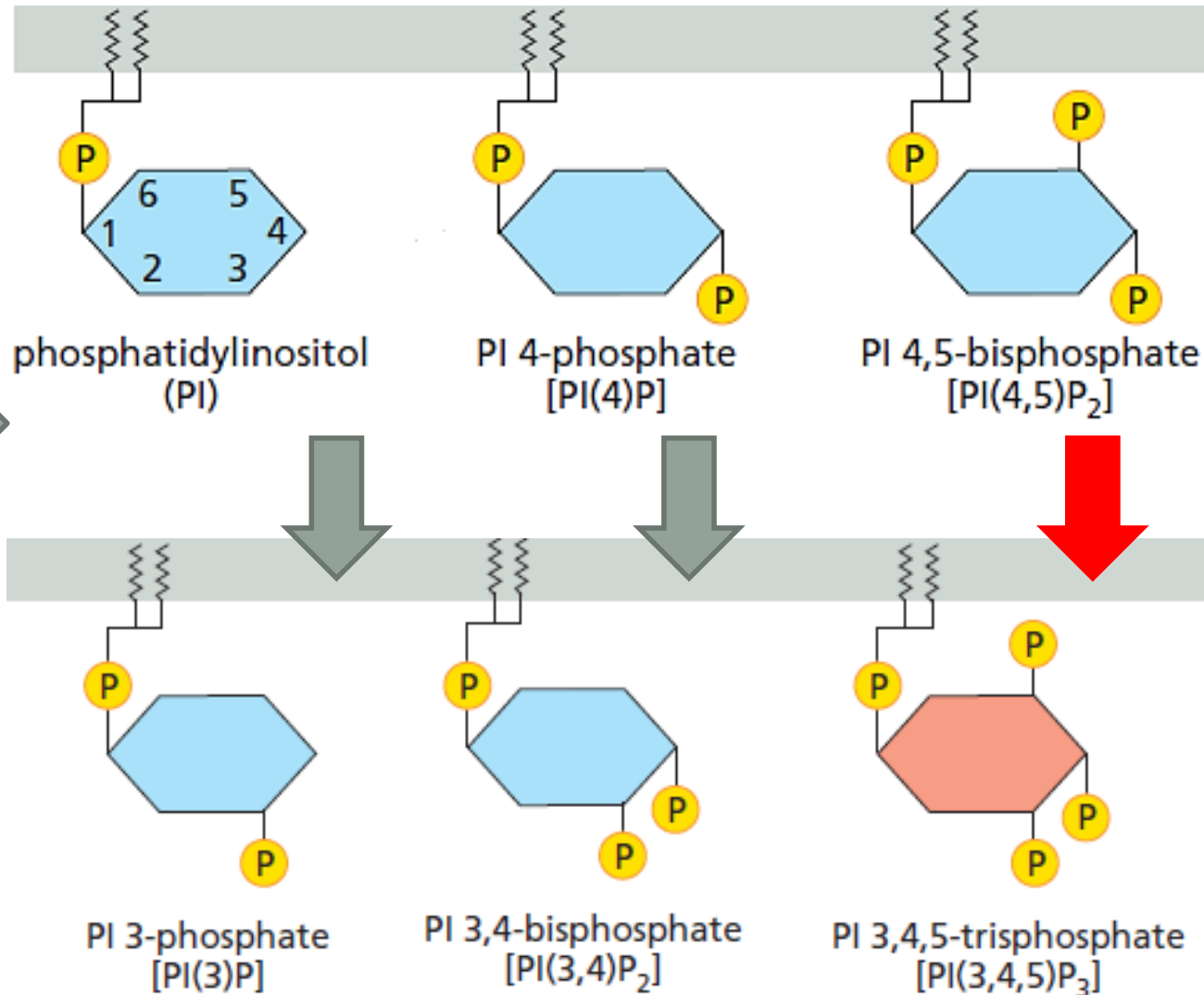
Receptor Tyrosine
Kinase (RTK)

G protein-coupled
receptor (GPCR)



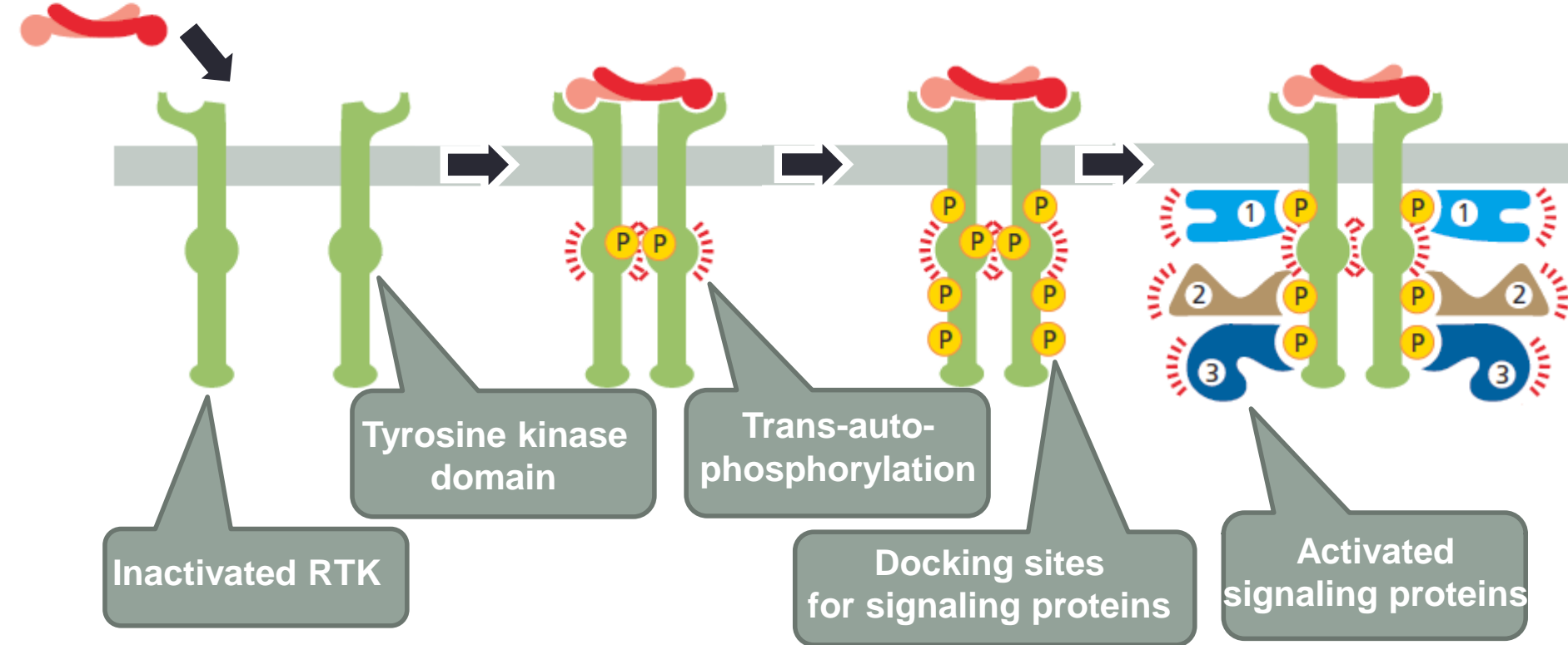
PI 3-Kinase Function

**PI3
K**

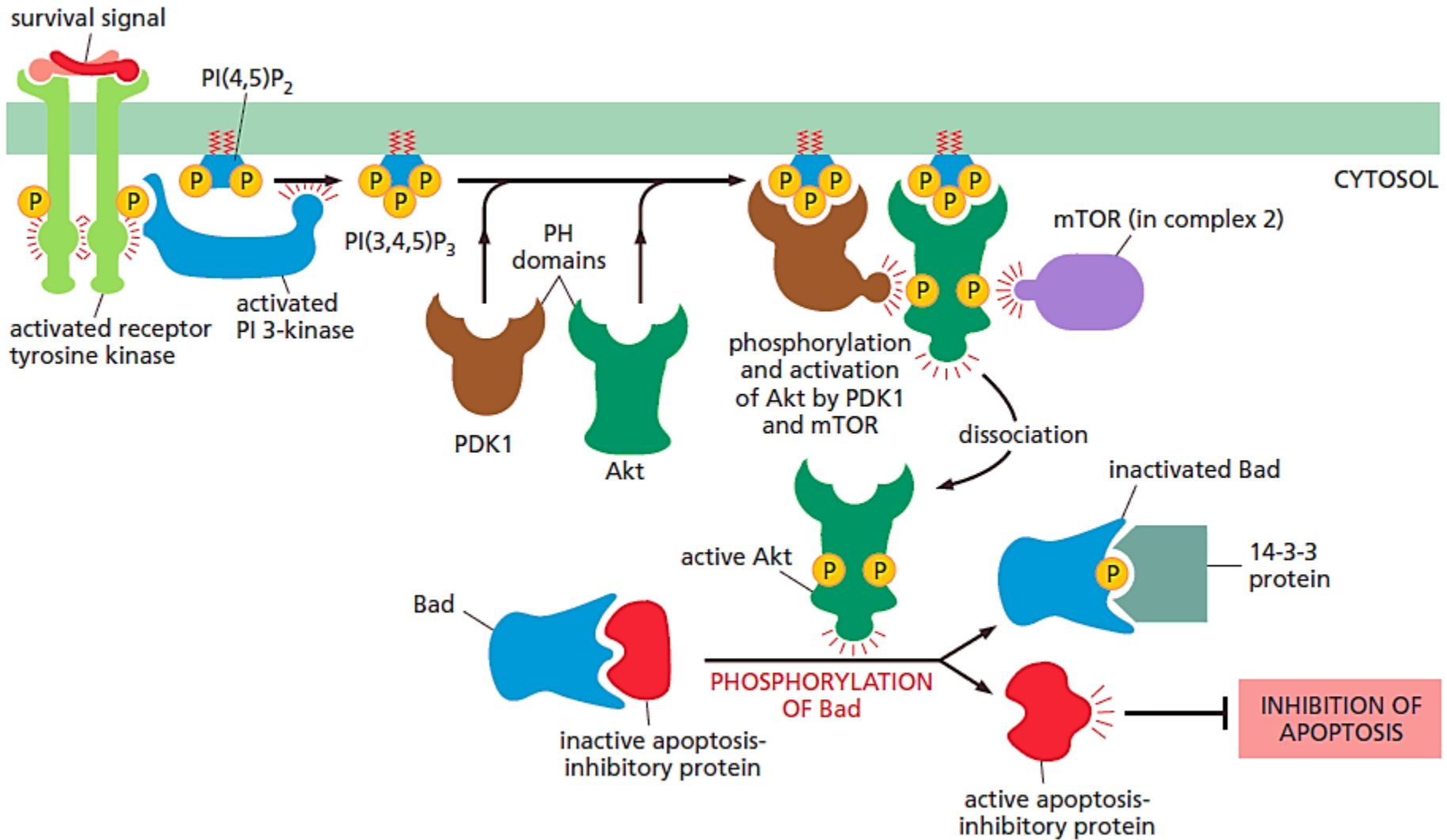


RTKs

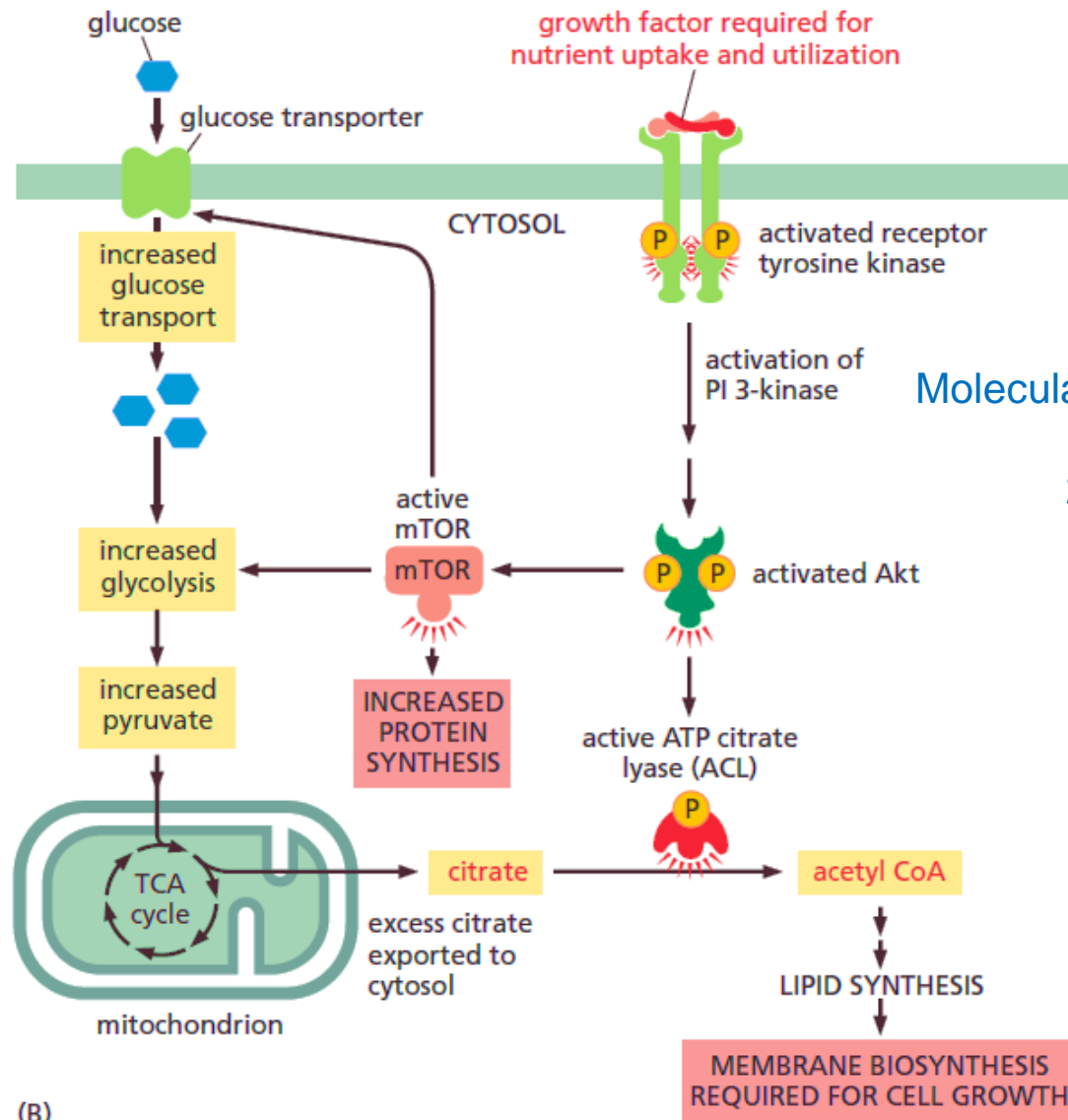
signal protein



PI3K Signaling and Cell Survival



PI3K Signaling and Cell Growth



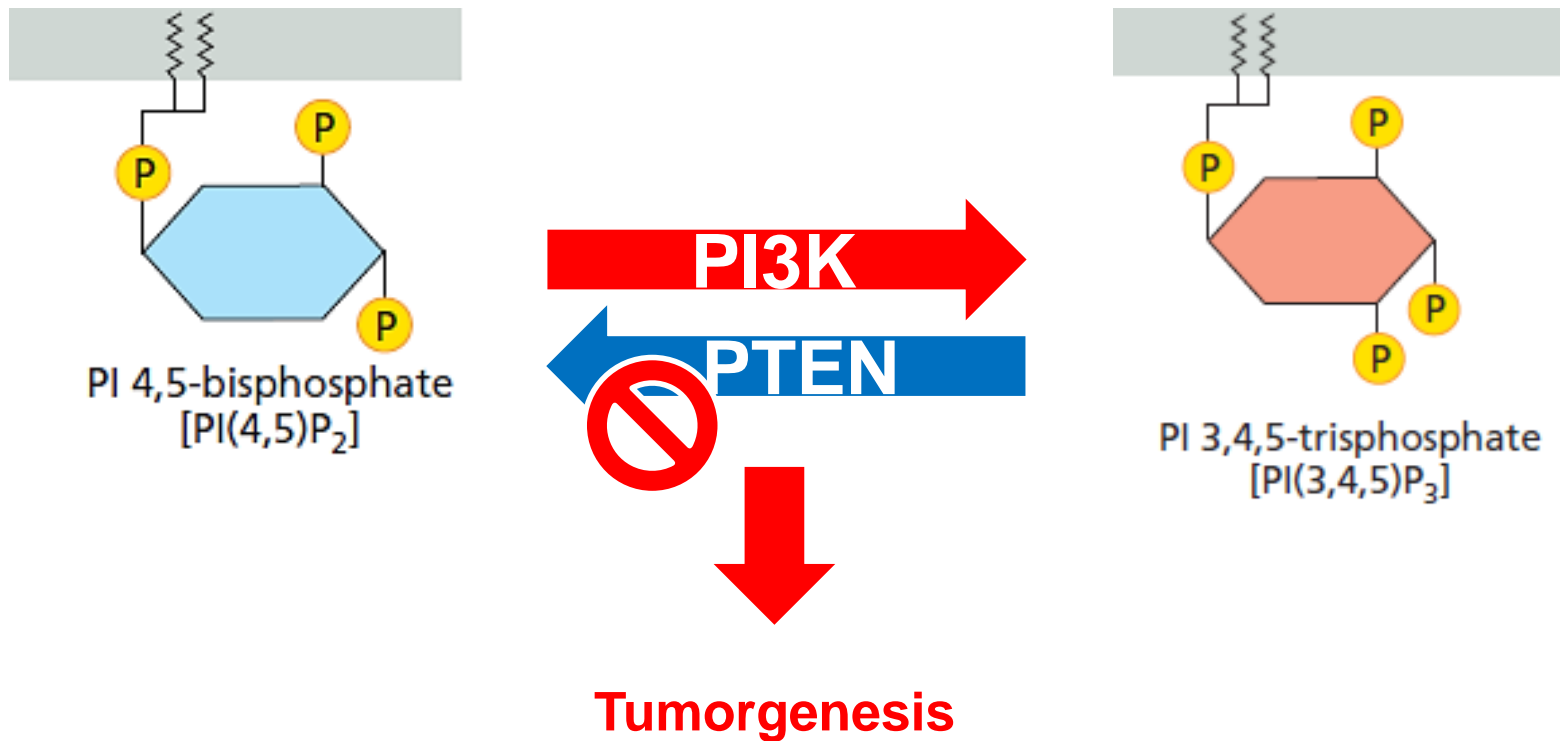
Molecular biology of the Cell,
6th edition,
2015, p.1114

(B)

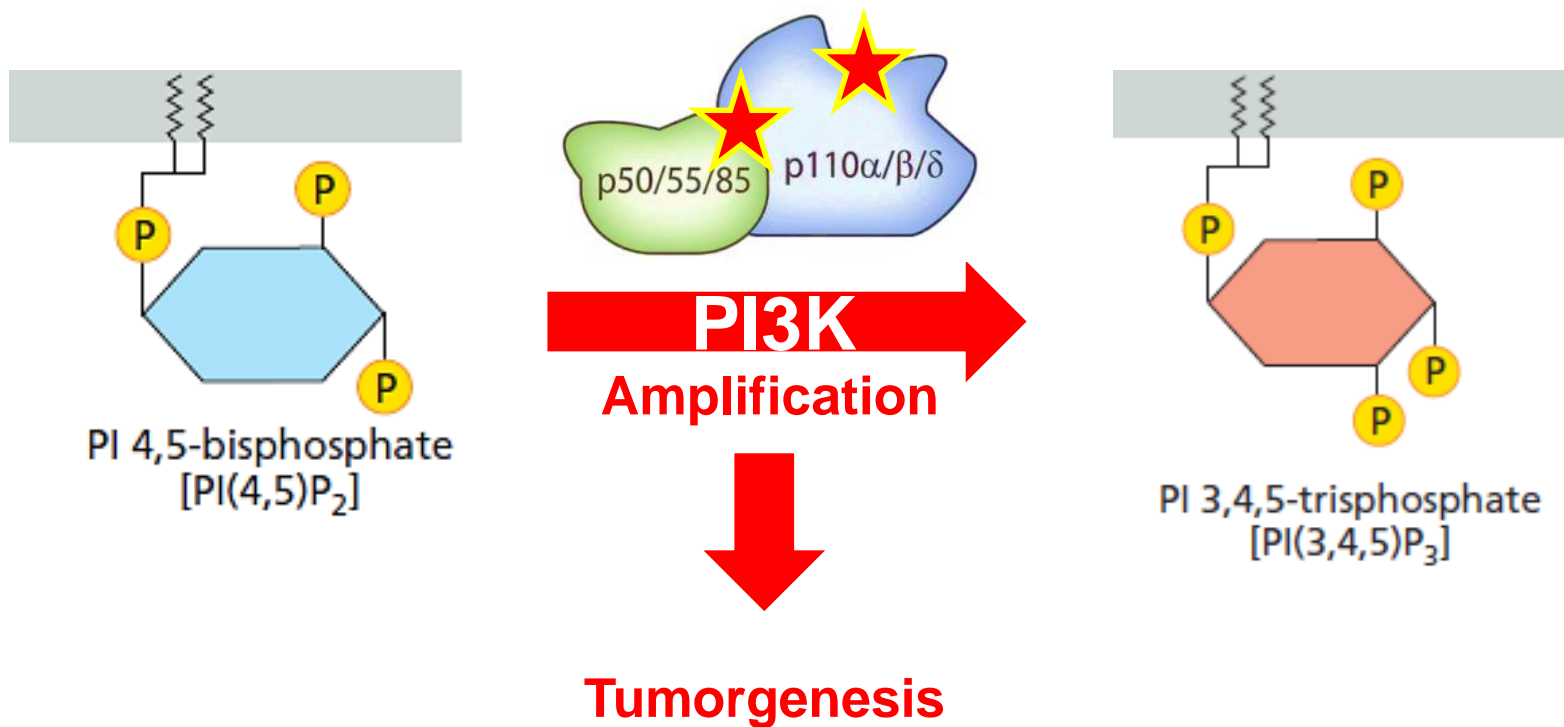
PI3K/Akt/mTOR pathway and Cancer

- Loss or Inactivation of PTEN
- Mutation or Amplification of PI3K
- Non-coding RNA

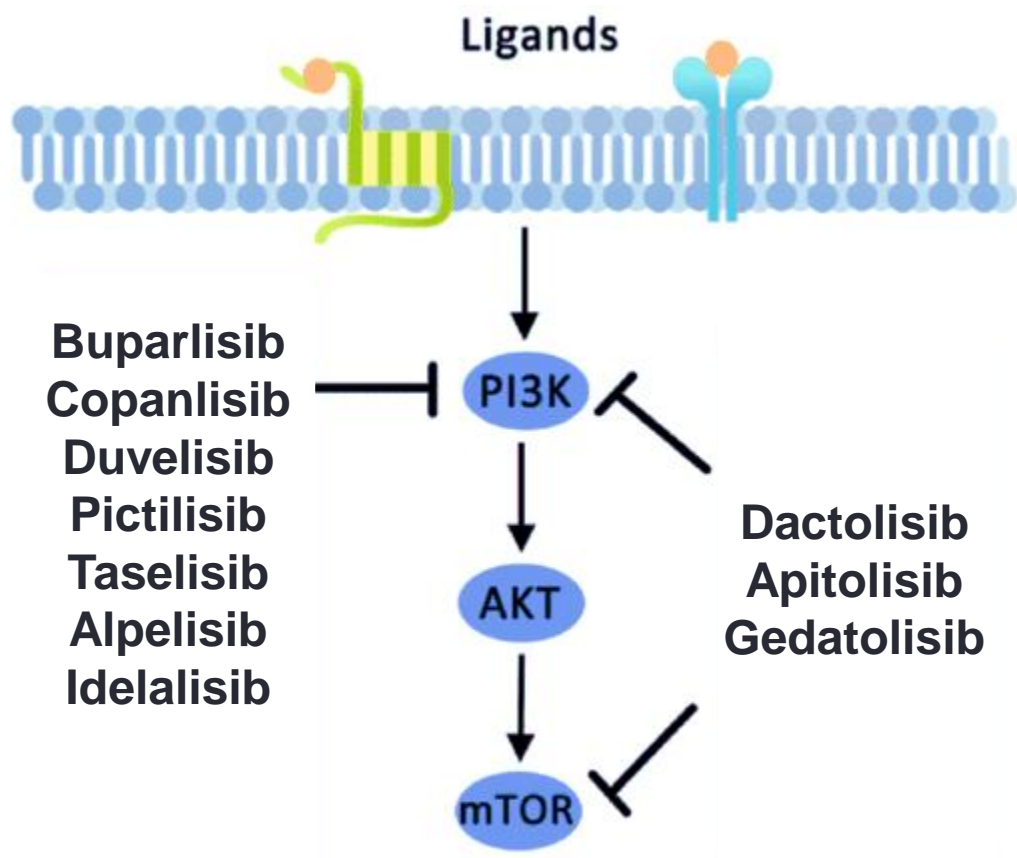
Loss or Inactivation of PTEN



Mutation or Amplification of PI3K



Therapeutics



References

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- Durrant, T. N. and I. Hers. "PI3K inhibitors in thrombosis and cardiovascular disease." *Clinical and Translational Medicine* **9** (2020).
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Thanks for your attention!