Gefitinib

Brand name: Iressa®
IUPAC: N-(3-chloro-4-fluorophenyl)-7-methoxy-6-(3-morpholin-4-ylpropoxy)quinazolin-4-amine
FDA approval: Yes
Manufacturer Link
Usage:

Gefitinib was aproved by the FDA in 2003 as a third line therapy for non-small cell lung cancer that is unresponsive to certain chemotherapy drugs, as it primarily binds to plasma proteins to take effect. Iressa® is administered as an oral tablet1

- 1Chu, E., & DeVita, V. T. (2015). Physicians' cancer chemotherapy drug manual 2015. Burlington, MA: Jones & Bartlett Learning.

Mechanism:

Gefitinib (Iressa®) is a tyrosine kinase inhibitor. It works to inhibit the epidermalgrowth factor receptor (EGFR) pathway and any negative signaling found there. EGFR is a receptor found on the cell surface that binds EGF protein, and phosphorylates (adds a phosphate group) tyrosine residues of proteins in a signal pathway. Gefitinib binds the EGFR within the cell and blocks the tyrosine kinase, switching off the EGFR signal, which disallows the cancer cell to grow.1

The diagram below shows the 3D molecular structure of Gefitinib.

Stick Sphere Cross Rotate

- 1Chu, E., & DeVita, V. T. (2015). Physicians' cancerchemotherapy drug manual 2015. Burlington, MA: Jones & Bartlett Learning.

Side effects:

Common side effects include: elevations in blood pressure (especially in those with previous cardiac issues), Pruritus (dry skin issues), mild nausea.1

- 1Chu, E., & DeVita, V. T. (2015). Physicians' cancerchemotherapy drug manual 2015. Burlington, MA: Jones & Bartlett Learning.