Mutant-selective EGFR Inhibitor PF-06459988

National Cancer Institute

Source

National Cancer Institute. Mutant-selective EGFR Inhibitor PF-06459988. NCI Thesaurus. Code C119624.

An orally available, small molecule, third-generation, irreversible inhibitor of epidermal growth factor receptor (EGFR) mutant (EGFRm) forms with potential antineoplastic activity. EGFR inhibitor PF-06459988 specifically binds to and inhibits mutant forms of EGFR, including the secondary acquired resistance mutation T790M, which prevents EGFR-mediated signaling and leads to cell death in EGFRm-expressing tumor cells. Compared to some other EGFR inhibitors, PF-06459988 may have therapeutic benefits in tumors with T790M-mediated drug resistance. This agent shows minimal activity against wild-type EGFR (WT EGFR), and does not cause dose-limiting toxicities that are seen with the use of non-selective EGFR inhibitors, which also inhibit WT EGFR. EGFR, a receptor tyrosine kinase mutated in many tumor cell types, plays a key role in tumor cell proliferation and tumor vascularization.