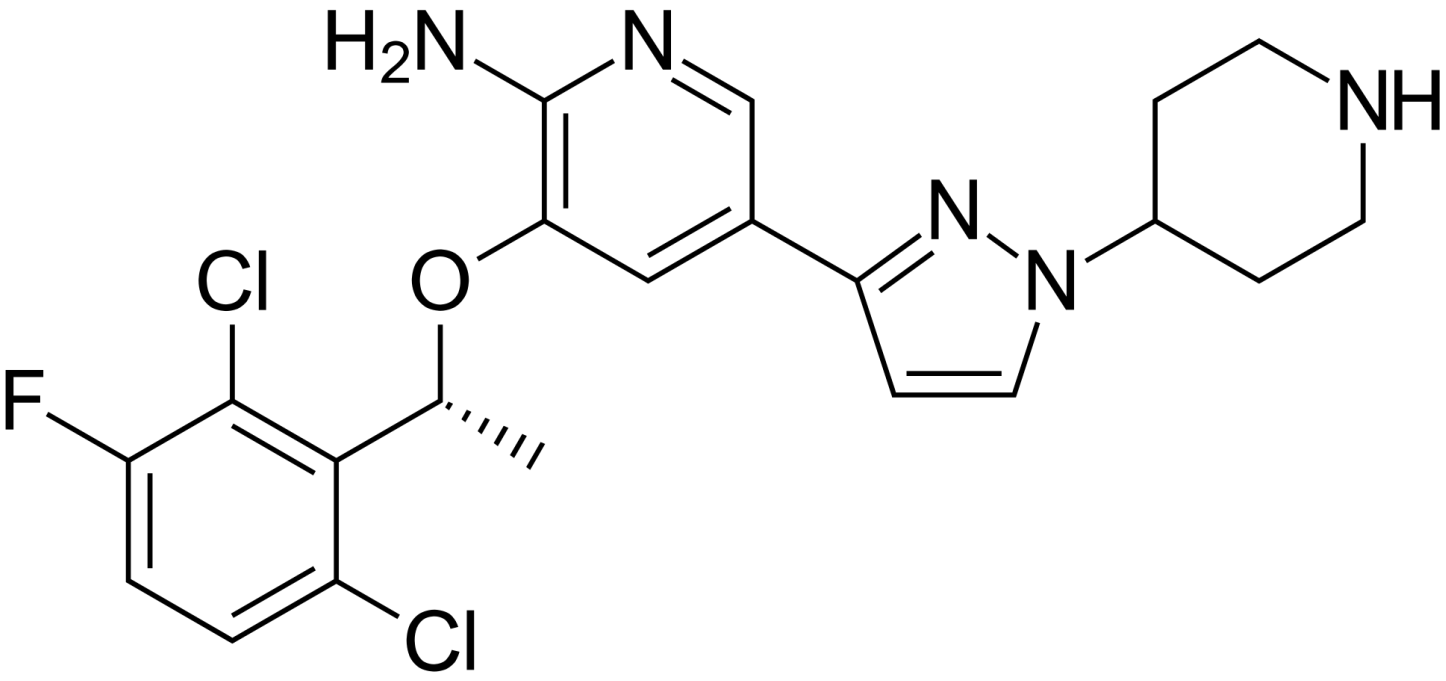
Crizotinib

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Brand name: Xalkori®
IUPAC: 3-[(1R)-1-(2,6-dichloro-3-fluorophenyl)ethoxy]-5-(1-piperidin-4-ylpyrazol-4-yl)pyridin-2-amine
FDA approval: Yes
Enlace del fabricante
Usage:

Crizotinib is used in the treatment of patients with metastatic non-small cell lung cancer, specifically in those whose tumors are anaplastic lymphoma kinase (ALK)-positive, which is detected by an FDA-approved test. Crizotinib is also used in the treatment of patients with metastatic NSCLC whose tumors are ROS1-positive. Crizotinib is typically administered in pill form.1

Xalkori is being approved with a companion diagnostic test that will help determine if a patient has the abnormal ALK gene, a first-of-a-kind genetic test called the Vysis ALK Break Apart FISH Probe Kit. It is the second such targeted therapy approved by the FDA this year.

This ALK gene abnormality causes cancer development and growth. About 1 percent to 7 percent of those with NSCLC have the ALK gene abnormality. Patients with this form of lung cancer are typically non-smokers. Xalkori works by blocking certain proteins called kinases, including the protein produced by the abnormal ALK gene. Xalkori is a pill taken twice a day as a single-agent treatment.

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1 Dosing. (n.d.). Retrieved June 27, 2017, from https://www.pfizerpro.com/product/xalkori/hcp/dosing?source=google&HBX_PK=s_crizotinib%2Bside%2Beffects&o=69985681%7C245244793%7C0&skwid=43700012995234762

Mechanism:

Xalkori (crizotinib) is an inhibitor of receptor tyrosine kinases including ALK, Hepatocyte Growth Factor Receptor (HGFR, c-Met), and Recepteur d’Origine Nantais (RON). Translocations can affect the ALK gene resulting in the expression of oncogenic fusion proteins. The formation of ALK fusion proteins results in activation and dysregulation of the gene’s expression and signaling which can contribute to increased cell proliferation and survival in tumors expressing these proteins.

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

Sphere | Stick | Line | Cross | Rotate

Side effects:

Less common side effects of Xalkori include: headache with chest pain and sever dizziness, fainting, fast or pounding heartbeats; very slow heart rate; a light-headed feeling, like you may pass out; sudden chest pain or discomfort, wheezing dry cough or cough with mucus, feeling short of breath; fever, swollen gums, painful mouth sores, pain when swallowing, cold or flu symptoms; easy bruising or bleeding (nosebleeds, bleeding gums); or liver problems- nausea, upper stomach pain, itching, tired feeling, loss of appetite, dark urine, clay-colored stools, jaundice (yellowing of the skin or eyes).

Common Xalkori side effects many include: nausea, vomiting; diarrhea, constipation; swelling in your hands or feet; feeling tired; or vision problems such as blurred vision, increased sensitivity of your eyes to light, or seeing flashes of light or "floaters."

Contraindications:

Continued use of Crizotinib can cause a variety of problems, including: liver, lung, heart and vision issues. If you encounter any of these issues, please consult your physician.[1]

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1 Important Safety Information. (n.d.). Retrieved June 27, 2017, from https://www.xalkori.com/?source=google&HBX_PK=s_xalkori&o=83275543%7C259127269%7C0&skwid=43700015398801142&src_code=XAKW10030845