

Nilotinib-resistant KIT mutants do not bind nilotinib

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30/04/2024

Introduction

Reactome is open-source, open access, manually curated and peer-reviewed pathway database. Pathway annotations are authored by expert biologists, in collaboration with Reactome editorial staff and cross-referenced to many bioinformatics databases. A system of evidence tracking ensures that all assertions are backed up by the primary literature. Reactome is used by clinicians, geneticists, genomics researchers, and molecular biologists to interpret the results of high-throughput experimental studies, by bioinformaticians seeking to develop novel algorithms for mining knowledge from genomic studies, and by systems biologists building predictive models of normal and disease variant pathways.

The development of Reactome is supported by grants from the US National Institutes of Health (P41 HG003751), University of Toronto (CFREF Medicine by Design), European Union (EU STRP, EMI-CD), and the European Molecular Biology Laboratory (EBI Industry program).

Literature references

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Reactome database release: 88

This document contains 1 reaction ([see Table of Contents](#))

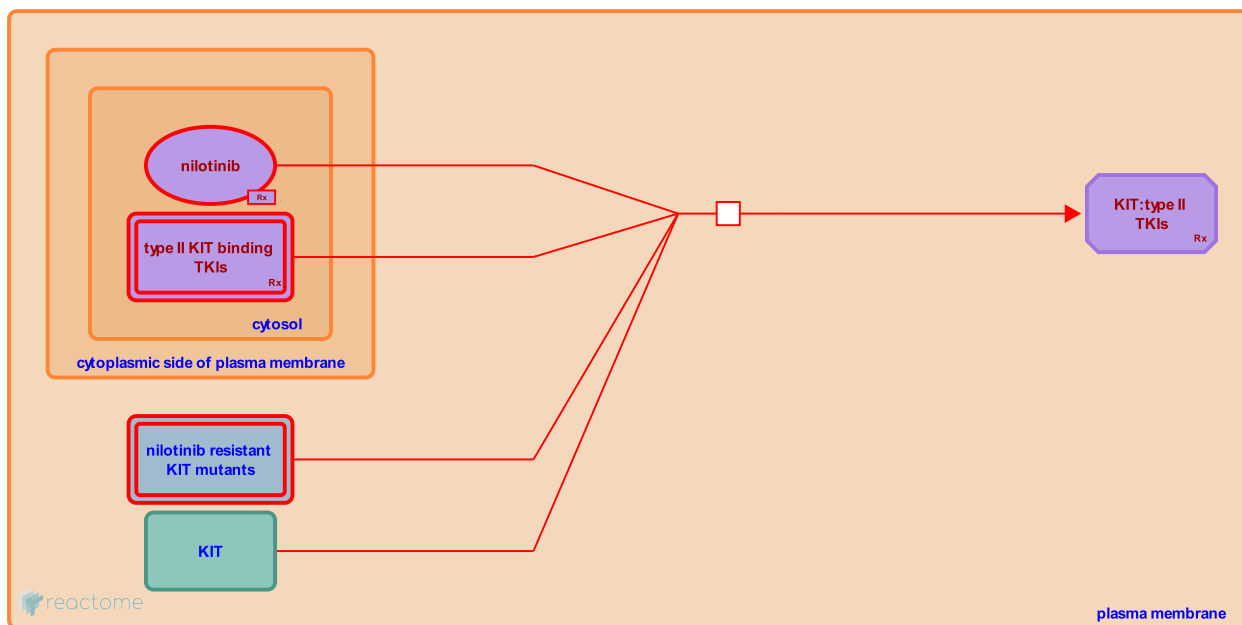
Nilotinib-resistant KIT mutants do not bind nilotinib [↗](#)

Stable identifier: R-HSA-9669868

Type: transition

Compartments: plasma membrane

Diseases: cancer



A number of secondary mutations that arise in mutated KIT receptors confer resistance to nilotinib. This is particularly true for the 'gate-keeper' mutation T760I that increases the affinity of the receptor for ATP, rendering it less susceptible to ATP-competitive inhibitors (Kissova et al, 2016; Serrano et al, 2019; Guo et al, 2007; Roberts et al, 2007; reviewed in Klug et al, 2018; Roskoski, 2018).

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Editions

2020-03-13	Reviewed	Serrano, C., Pilco-Janeta, D., García-Valverde, A.
2020-04-01	Authored	Rothfels, K.
2020-05-04	Edited	Rothfels, K.