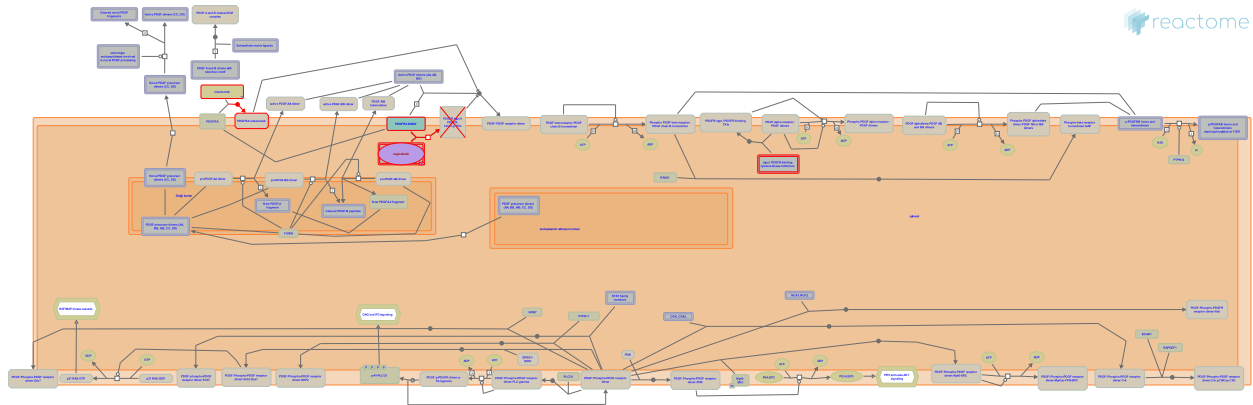


# Regorafenib-resistant PDGFR mutants



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This is just an excerpt of a full-length report for this pathway. To access the complete report, please download it at the [Reactome Textbook](https://reactome.org/textbook).

06/05/2024

## 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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- Sidiropoulos, K., Viteri, G., Sevilla, C., Jupe, S., Webber, M., Orlic-Milacic, M. et al. (2017). Reactome enhanced pathway visualization. *Bioinformatics*, 33, 3461-3467. [↗](#)
- Fabregat, A., Jupe, S., Matthews, L., Sidiropoulos, K., Gillespie, M., Garapati, P. et al. (2018). The Reactome Pathway Knowledgebase. *Nucleic Acids Res*, 46, D649-D655. [↗](#)
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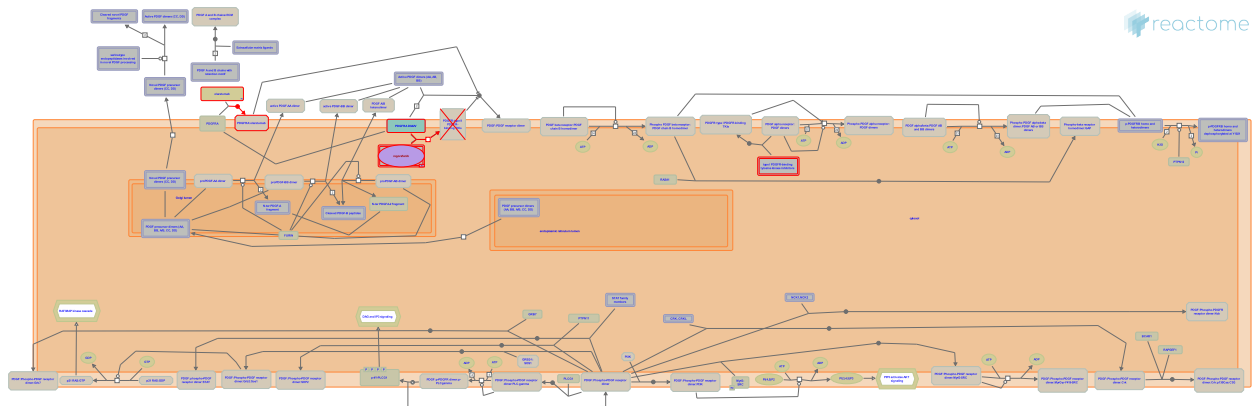
Reactome database release: 88

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

# Regorafenib-resistant PDGFR mutants ↗

**Stable identifier:** R-HSA-9674403

**Diseases:** cancer



Regorafenib is a type II TKI that is approved for the treatment of advanced gastrointestinal stromal tumors. Although regorafenib is effective against a number of KIT and PDGFR mutations, it only weakly inhibits the activity of the most prevalent PDGFRA allele, D842V (Evans et al, 2017).

## Literature references

Heinrich, MC., Zhang, Y., Houdous, BL., Shutes, A., Lengauer, C., Evans, EK. et al. (2017). A precision therapy against cancers driven by *KIT/PDGFR* mutations. *Sci Transl Med*, 9. ↗

## Editions

2020-02-06	Reviewed	Ip, CKM.
2020-02-25	Authored, Edited	Rothfels, K.

## Regorafenib-resistant PDGFR mutants don't bind regorafenib ↗

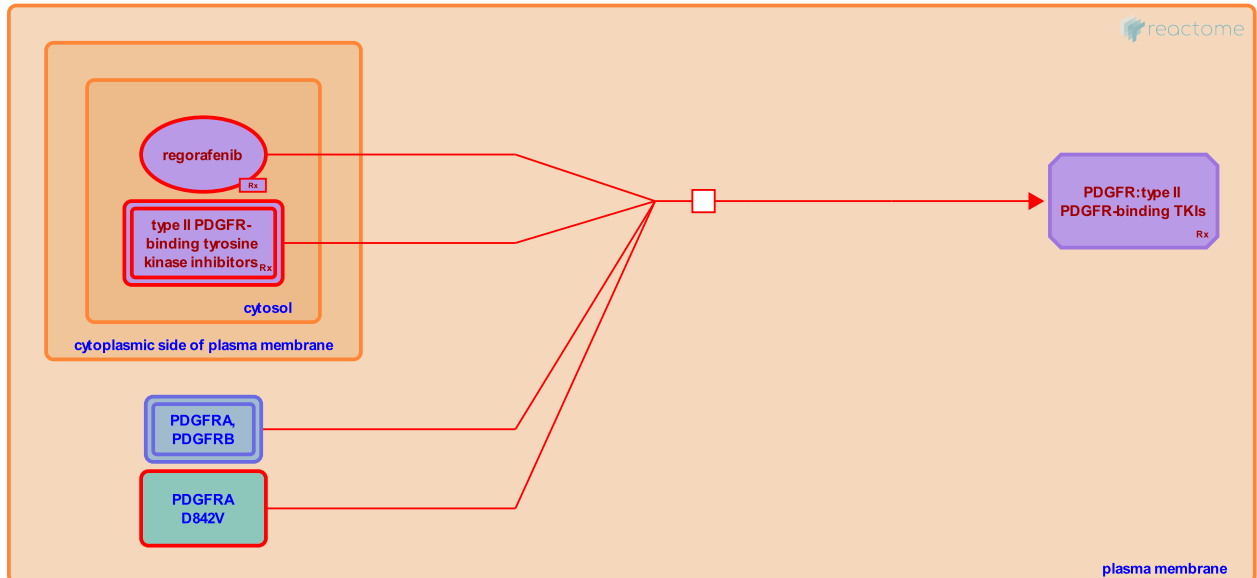
**Location:** [Regorafenib-resistant PDGFR mutants](#)

**Stable identifier:** R-HSA-9674408

**Type:** transition

**Compartments:** plasma membrane, cytosol

**Diseases:** cancer



Regorafenib only weakly inhibits the activity of the most prevalent PDGFRA mutation, D842V (Evans et al, 2017).

### Literature references

Heinrich, MC., Zhang, Y., Hodous, BL., Shutes, A., Lengauer, C., Evans, EK. et al. (2017). A precision therapy against cancers driven by *KIT/PDGFR* mutations. *Sci Transl Med*, 9. ↗

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