FNTB inhibitors bind FNTA:FNTB

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https://reactome.org
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.

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Literature references


Reactome database release: 82

This document contains 1 reaction (see Table of Contents)
FNTB inhibitors bind FNTA:FNTB

Stable identifier: R-HSA-9647987

Type: binding

Compartments: cytosol

Because prenylation is important for RAS membrane localization and function, inhibition of this step of RAS processing was viewed as a promising early therapeutic target for RAS-driven cancers (reviewed in Gysin et al, 2011). Farnesyltransferase inhibitors such as lonafarnib and tipifarnib are small molecule CaaX competitive inhibitors that inhibit cell growth of a range of cancer cell lines and tumor xenografts (Njoroge et al, 1998; End et al, 2001; Liu et al, 1998; Ashar et al, 2001). Unfortunately, the clinical use of these drugs is hampered by the fact that both KRAS and NRAS can be geranylgeranylated when FTase is inhibited, restoring membrane localization and function (Fiordalisi et al, 2003). FTase inhibitors may have clinical use in the treatment of HRAS driven cancers, such as bladder and thyroid cancers (reviewed in Gysin et al, 2011; Lu et al, 2016).

Lonafarnib is a farnesyltransferase inhibitor of growth factor signalling that prevented SARS-CoV-2 replication in Caco-2 and UKF-RC-2 cells at clinically achievable concentrations (Klann et al, 2020).

**Literature references**


**Editions**

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