Defective Intrinsic Pathway for Apoptosis

Due to p14ARF Loss of Function

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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: 72

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

https://release.reactome.org
Defective Intrinsic Pathway for Apoptosis Due to p14ARF Loss of Function

Stable identifier: R-HSA-9645722

Diseases: cancer

Cancer-derived missense mutations in the CDKN2A gene that affect the C-terminal arginine-rich region of p14ARF (also known as CDKN2A transcription isoform 4, CDKN2A-4, p14 or ARF) impair p14ARF binding to the mitochondrial matrix protein C1QBP and interfere with p53-mediated apoptosis. Many mutations in the CDKN2A locus that affect C-terminal arginines of p14ARF are silent in p16INK4A (CDKN2A-1) (Itahana and Zhang 2008).

Literature references

p14ARF mutants do not bind C1QBP

**Location:** Defective Intrinsic Pathway for Apoptosis Due to p14ARF Loss of Function

**Stable identifier:** R-HSA-9645766