

# SPOP:CUL3:RBX1 ubiquitinates GLI2,3

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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

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Reactome database release: 88

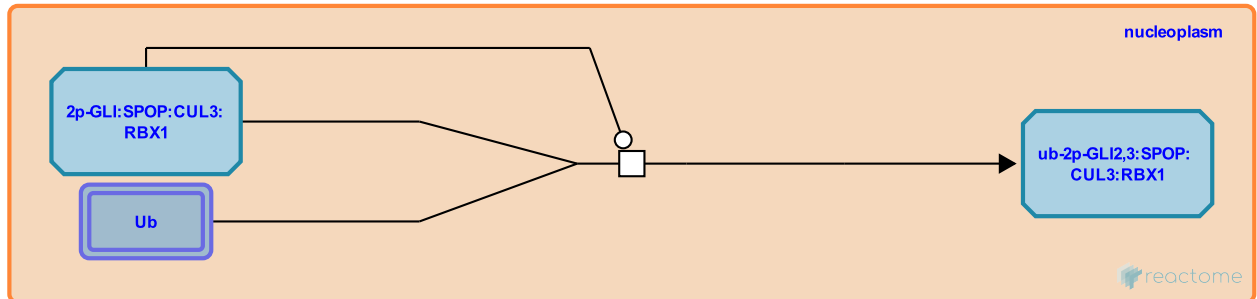
This document contains 1 reaction ([see Table of Contents](#))

## SPOP:CUL3:RBX1 ubiquitinates GLI2,3 [↗](#)

**Stable identifier:** R-HSA-5635856

**Type:** transition

**Compartments:** nucleoplasm



The transcriptional activity of full-length activated Ci/GLI proteins is restricted by their rapid ubiquitin-mediated degradation after initiation of Hh signaling (Ohlmeyer et al, 1998; Humke et al, 2010; Tukachinsky et al, 2010; Wen et al, 2010). Ubiquitination of Ci, GLI2 and GLI3 is mediated by the E3 ligase complex SPOP:CUL3:RBX1, which ubiquitinates the transcription factors in a Hh-dependent manner (Zhang et al, 2006; Kent et al, 2006; Zhang et al, 2009; Chen et al, 2009).

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### Editions

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