

NEIL3 recognizes and binds to 5-guanidinohydantoin (Gh) in telomeric DNA

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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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Reactome database release: 88

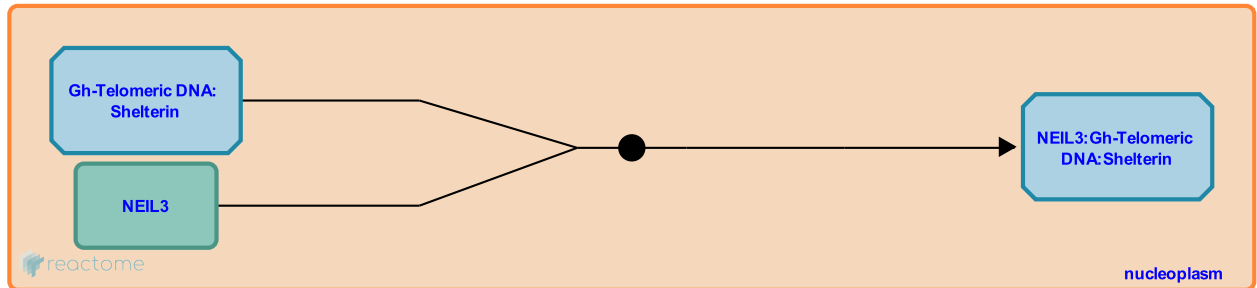
This document contains 1 reaction ([see Table of Contents](#))

NEIL3 recognizes and binds to 5-guanidinohydantoin (Gh) in telomeric DNA [↗](#)

Stable identifier: R-HSA-9629195

Type: binding

Compartments: nucleoplasm



NEIL3, a DNA glycosylase of the NEIL family, recognizes and binds to damaged telomeric DNA containing 5-guanidinohydantoin (Gh). Binding of NEIL3 to telomeric DNA is facilitated by interaction of NEIL3 with TRF1, a component of the telomeric shelterin complex (Zhou et al. 2017).

Literature references

Chan, J., Opresko, PL., Lambelé, M., Yusufzai, T., Wallace, SS., Stumpff, J. et al. (2017). NEIL3 Repairs Telomere Damage during S Phase to Secure Chromosome Segregation at Mitosis. *Cell Rep*, 20, 2044-2056. [↗](#)

Editions

2019-01-05	Authored	Orlic-Milacic, M.
2019-02-11	Reviewed	Zhou, J.
2019-02-12	Edited	Orlic-Milacic, M.