

OGG1 glycosylase mediated recognition and binding of an 8-oxoguanine opposite to a cytosine

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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

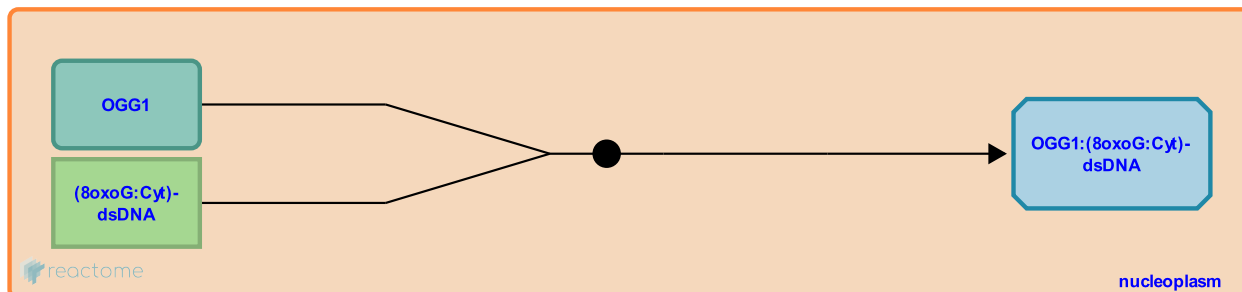
This document contains 1 reaction ([see Table of Contents](#))

OGG1 glycosylase mediated recognition and binding of an 8-oxoguanine opposite to a cytosine ↗

Stable identifier: R-HSA-110235

Type: binding

Compartments: nucleoplasm



OGG1 is an N-glycosylase and DNA lyase that recognizes oxidative DNA damage in the form of 8-oxoguanine (8oxoG). 8oxoG forms at a high frequency in the DNA of aerobic organisms. As 8oxoG has a preference for mispairing with adenine, it is one of the underlying causes of G:C → T:A transversions, the type of mutation frequently found in cancer (Aburatani et al. 1997, Rosenquist et al. 1997, Roldan-Arjona et al. 1997, Radicella et al. 1997, Bjoras et al. 1997, Bruner et al. 2000).

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Editions

2004-02-03	Authored, Edited	Matthews, L.
2014-12-04	Edited, Revised	Orlic-Milacic, M.
2014-12-22	Reviewed	Borowiec, JA.
2019-10-02	Reviewed	Vlahopoulos, S.
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