Excision of 8-oxoguanine by OGG1 glycosylase

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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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Sidiropoulos, K., Viteri, G., Sevilla, C., Jupe, S., Webber, M., Orlic-Milacic, M. et al. (2017). Reactome enhanced pathway visualization. *Bioinformatics, 33*, 3461-3467. ↗

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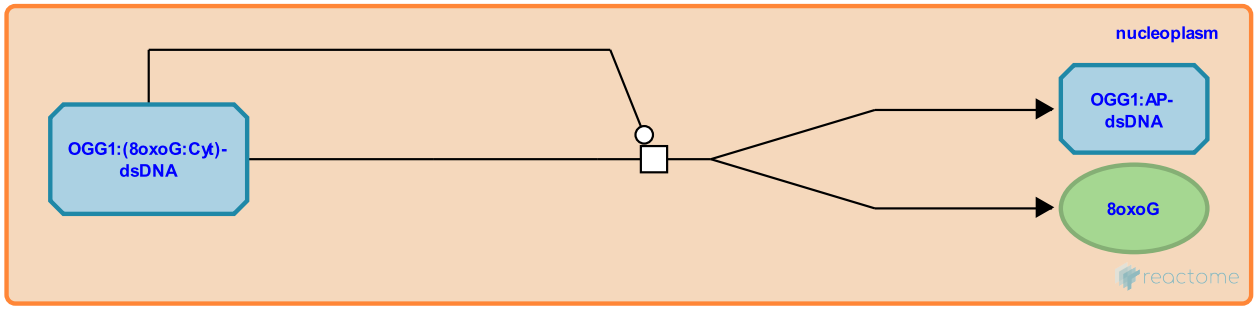
Stable identifier: R-HSA-110243

Type: transition

Compartments: nucleoplasm



OGG1 acts as an N-glycosylase and a DNA beta-lyase to excise 8-oxoguanine (8oxoG) from dsDNA, creating an apurinic/apyrimidinic (AP) site, and to nick the DNA sugar-phosphate backbone 5' to the AP site, creating a single strand break (SSB) (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

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