TDG excises 5-formylcytosine

May, B., Mukherji, M., Pfeifer, GP.
**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: 83

This document contains 1 reaction (see Table of Contents)
Thymine DNA glycosylase (TDG) excises 5-formylcytosine (5-fC) from DNA (Maiti and Drohat 2011, Zhang et al. 2012, inferred from mouse in He et al. 2011) by flipping the base out of the helix and cleaving the N-glycosidic bond to leave an abasic site (apurinic/apyrimidinic site, AP site). TDG interacts with the G opposite the excised base and remains bound to the abasic site (Maiti et al 2008). Dissociation of TDG from DNA is the rate-limiting step of the reaction.

**Literature references**


**Editions**

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