

NOX2 generates superoxide from oxygen

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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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Reactome database release: 88

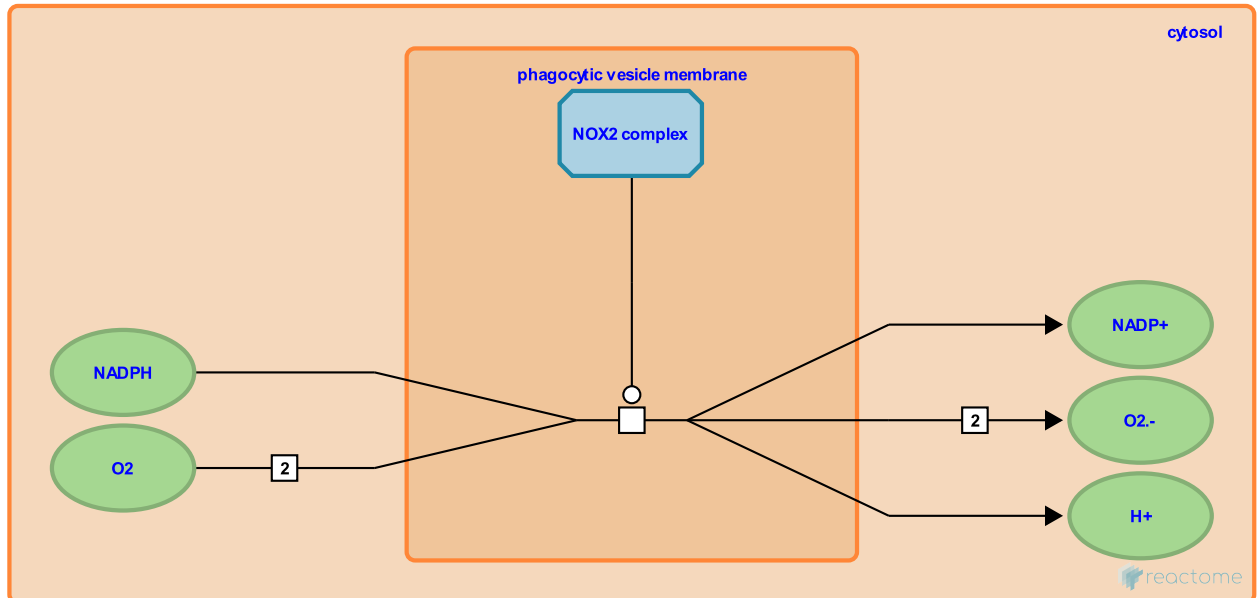
This document contains 1 reaction ([see Table of Contents](#))

NOX2 generates superoxide from oxygen ↗

Stable identifier: R-HSA-1222376

Type: transition

Compartments: phagocytic vesicle membrane, cytosol



Macrophage NOX2 is a membrane complex that generates superoxide anions by reduction of oxygen with NADPH (Babior 1999, Dinauer et al. 1991).

Literature references

Dinauer, MC., Muhlebach, TJ., Erickson, RW., Seger, RA., Curnutte, JT., Messner, H. et al. (1991). Point mutation in the cytoplasmic domain of the neutrophil p22-phox cytochrome b subunit is associated with a nonfunctional NADPH oxidase and chronic granulomatous disease. *Proc Natl Acad Sci U S A*, 88, 11231-5. ↗

Babior, BM. (1999). NADPH oxidase: an update. *Blood*, 93, 1464-76. ↗

Editions

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