

eNOS:Caveolin-1 complex binds to Nostrin

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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

- Fabregat, A., Sidiropoulos, K., Viteri, G., Forner, O., Marin-Garcia, P., Arnau, V. et al. (2017). Reactome pathway analysis: a high-performance in-memory approach. *BMC bioinformatics*, 18, 142. [↗](#)
- Sidiropoulos, K., Viteri, G., Sevilla, C., Jupe, S., Webber, M., Orlic-Milacic, M. et al. (2017). Reactome enhanced pathway visualization. *Bioinformatics*, 33, 3461-3467. [↗](#)
- Fabregat, A., Jupe, S., Matthews, L., Sidiropoulos, K., Gillespie, M., Garapati, P. et al. (2018). The Reactome Pathway Knowledgebase. *Nucleic Acids Res*, 46, D649-D655. [↗](#)
- Fabregat, A., Korninger, F., Viteri, G., Sidiropoulos, K., Marin-Garcia, P., Ping, P. et al. (2018). Reactome graph database: Efficient access to complex pathway data. *PLoS computational biology*, 14, e1005968. [↗](#)

Reactome database release: 88

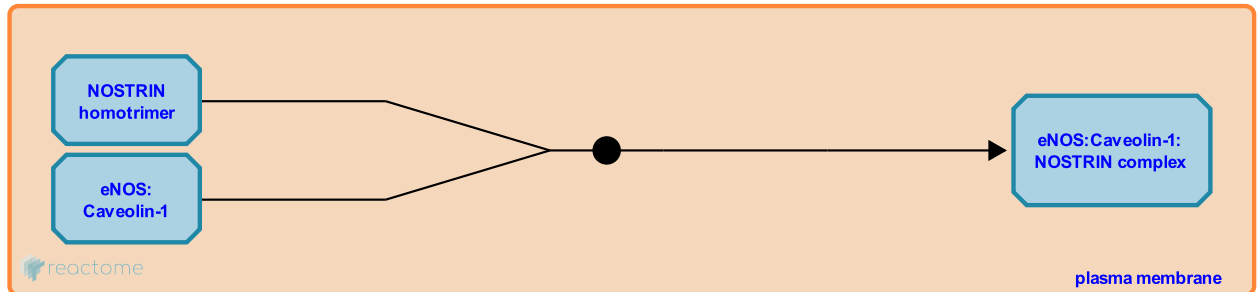
This document contains 1 reaction ([see Table of Contents](#))

eNOS:Caveolin-1 complex binds to Nostrin [↗](#)

Stable identifier: R-HSA-203716

Type: binding

Compartments: plasma membrane



eNOS interacts with the SH3 domain of NOSTRIN (positions 434-506). Caveolin-1 also binds directly to NOSTRIN (residues 323-434), thus allowing formation of a ternary complex.

Literature references

Muller-Esterl, W., Oess, S., Opitz, N., Wiesenthal, A., Tikkanen, R., Icking, A. et al. (2006). Translocation of endothelial nitric-oxide synthase involves a ternary complex with caveolin-1 and NOSTRIN. *Mol Biol Cell*, 17, 3870-80. [↗](#)

Editions

2007-10-19	Authored	Hemish, J.
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