

p-S256-Aquaporin-2 passively transports water into cell

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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

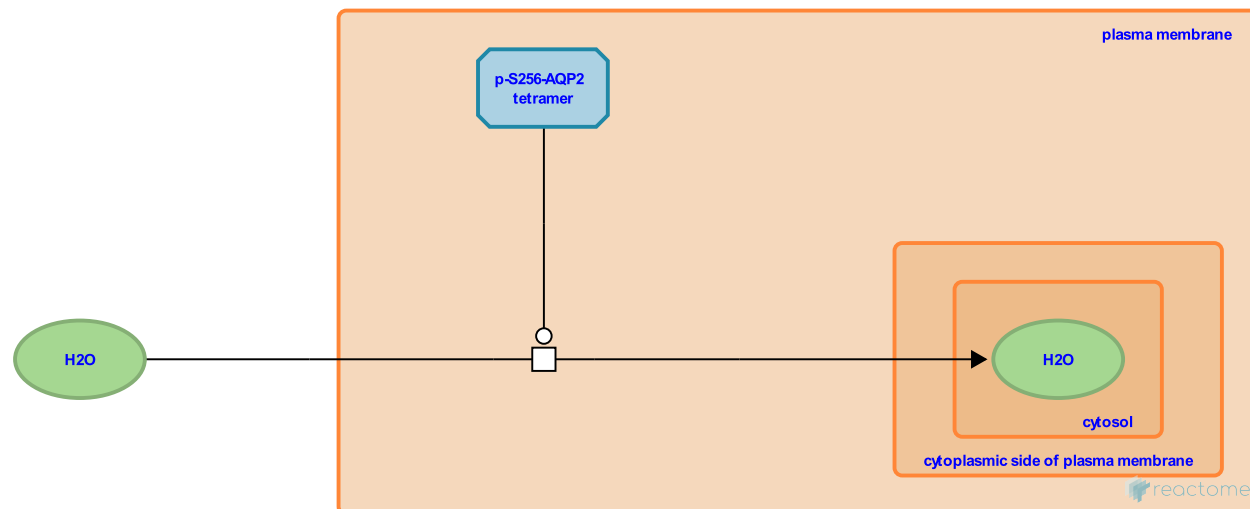
This document contains 1 reaction ([see Table of Contents](#))

p-S256-Aquaporin-2 passively transports water into cell ↗

Stable identifier: R-HSA-432065

Type: transition

Compartments: plasma membrane, cytosol, extracellular region



Aquaporin-2 (AQP2) passively transports water across membranes according to the osmotic gradient. AQP2 is mainly expressed in principal cells of the collecting duct and connecting tubule in the kidney. AQP2 function is acutely regulated by the antidiuretic hormone vasopressin. In the presence of vasopressin AQP is phosphorylated at Ser256. As inferred from rat and mouse Ser261, Ser264, and Thr269 may also be phosphorylated. These phosphorylations are thought to influence AQP2 trafficking and compartmentalization.

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Editions

2009-08-07	Authored, Edited	May, B.
2010-06-24	Reviewed	Beitz, E.
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