

BRWD1 binds AcK(9,14,18,79)-p(S10,T11)- histone H3

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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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Reactome database release: 88

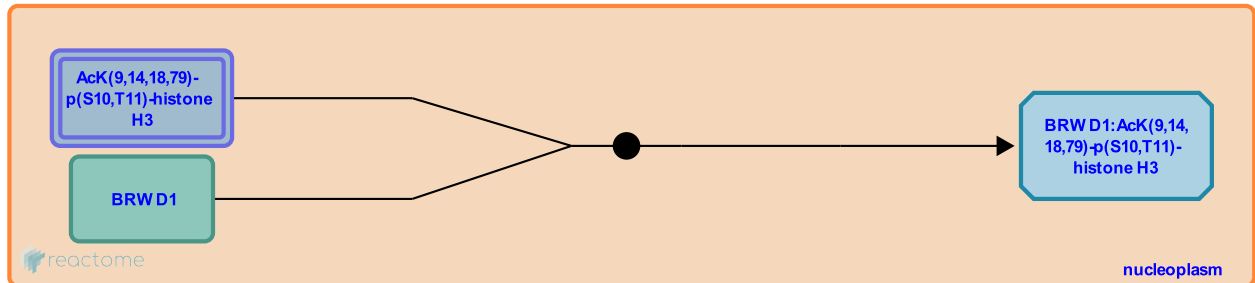
This document contains 1 reaction ([see Table of Contents](#))

BRWD1 binds AcK(9,14,18,79)-p(S10,T11)-histone H3 [↗](#)

Stable identifier: R-HSA-8865613

Type: binding

Compartments: nucleoplasm



Human Bromodomain and WD repeat-containing protein 1 (BRWD1) binds to histone H3 acetylated at lysine residues K9, K14, K18 and K79 and phosphorylated at serine residue S10 and threonine residue T11 in various combinations *in vitro* (Filippakopoulos et al. 2012). In mouse, it was confirmed that BRWD1 interacts with histone H3 acetylated at lysine residues K9 and K14, and phosphorylated at serine residue S10 (Mandal et al. 2015). Please note that the listed amino acid residues in mature histone H3 match nascent histone H3 residues K10, K15, K19, K80, S11 and T12, respectively. Amino acid positions in Reactome annotations of modified residues and Reactome systematic names correspond to positions in the nascent protein UniProt sequence.

Literature references

Pawson, T., Knapp, S., Barsyte-Lovejoy, D., Filippakopoulos, P., Gingras, AC., Arrowsmith, CH. et al. (2012). Histone recognition and large-scale structural analysis of the human bromodomain family. *Cell*, 149, 214-31. [↗](#)

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Editions

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