BRWD1 binds SMARCA4

Duenas, C., Mandal, M., Orlic-Milacic, M.

European Bioinformatics Institute, New York University Langone Medical Center, Ontario Institute for Cancer Research, Oregon Health and Science University.

01/05/2024

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.

The development of Reactome is supported by grants from the US National Institutes of Health (P41 HG003751), University of Toronto (CFREF Medicine by Design), European Union (EU STRP, EMI-CD), and the European Molecular Biology Laboratory (EBI Industry program).

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. ↗

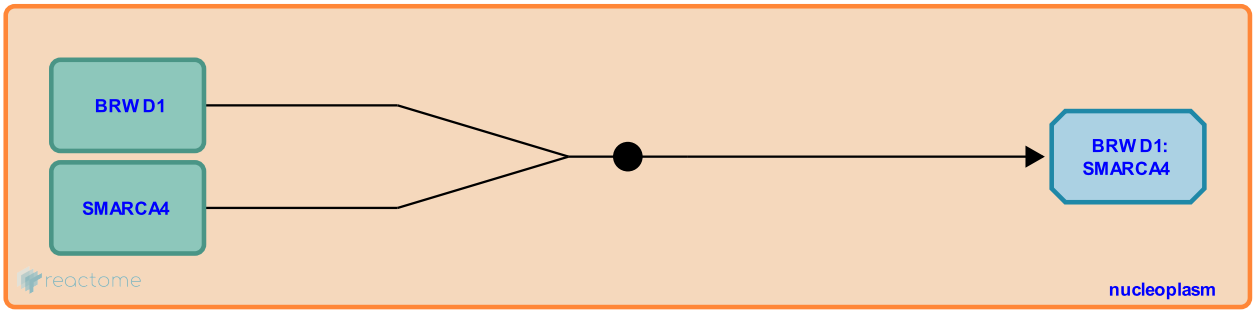
Fabregat, A., Korninger, F., Viteri, G., Sidiropoulos, K., Marin-Garcia, P., Ping, P. et al. (2018). Reactome graph database: Efficient access to complex pathway data. *PLoS computational biology, 14*, e1005968. ↗

BRWD1 binds SMARCA4

Stable identifier: R-HSA-8865605

Type: binding

Compartments: nucleoplasm



BRWD1 (WDR9) is a nuclear protein with eight WD repeats at the N-terminus and 2 centrally located bromodomains. BRWD1 is thought to be involved in chromatin remodelling and transcriptional regulation. BRWD1 binds to Transcription activator BRG1 (SMARCA4 or BRG1), a component of the SWI/SNF complex(Huang et al. 2003). Similar to BRWD1 (Mandal et al. 2015), SMARCA4 is also implicated in B-cell development (Choi et al. 2012, Bossen et al. 2015).

Literature references

Featherstone, M., Daniels, E., Rambaldi, I., Huang, H. (2003). Expression of the Wdr9 gene and protein products during mouse development. *Dev. Dyn., 227*, 608-14.

Editions

2016-03-23	Authored, Edited	Orlic-Milacic, M.
2016-05-11	Reviewed	Mandal, M.
2017-07-26	Edited	Duenas, C.