

BAP1 binds BRCA1:BARD1 heterodimer

Baer, RJ., Orlic-Milacic, M.

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

The contents of this document may be freely copied and distributed in any media, provided the authors, plus the institutions, are credited, as stated under the terms of CC BY 4.0)
<u>License.</u> For more information see our License.

01/05/2024

https://reactome.org Page 1

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.

Reactome database release: 88

This document contains 1 reaction (see Table of Contents)

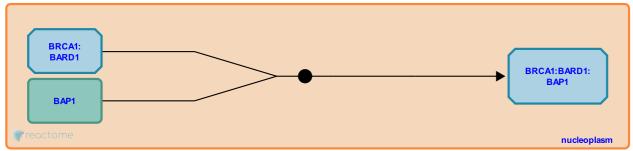
https://reactome.org Page 2

BAP1 binds BRCA1:BARD1 heterodimer

Stable identifier: R-HSA-9701003

Type: binding

Compartments: nucleoplasm



BAP1 binds to the BRCA1:BARD1 complex mainly through interaction with BARD1, although BRCA1 enhances the interaction. Amino acid residues 182-365 of BAP1 bind to the RING domain of BARD1, but outside of the BRCA1-binding site in the BARD1 RING domain (Nishikawa et al. 2009).

Literature references

Kojima, R., Fukuda, M., Koike, A., Nishikawa, H., Ohta, T., Wu, W. et al. (2009). BRCA1-associated protein 1 interferes with BRCA1/BARD1 RING heterodimer activity. *Cancer Res.*, 69, 111-9.

Editions

2020-09-30	Authored	Orlic-Milacic, M.
2020-11-04	Reviewed	Baer, RJ.
2020-11-09	Edited	Orlic-Milacic, M.