

ABCF1 binds EIF2

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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. [↗](#)
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- 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. [↗](#)
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Reactome database release: 70

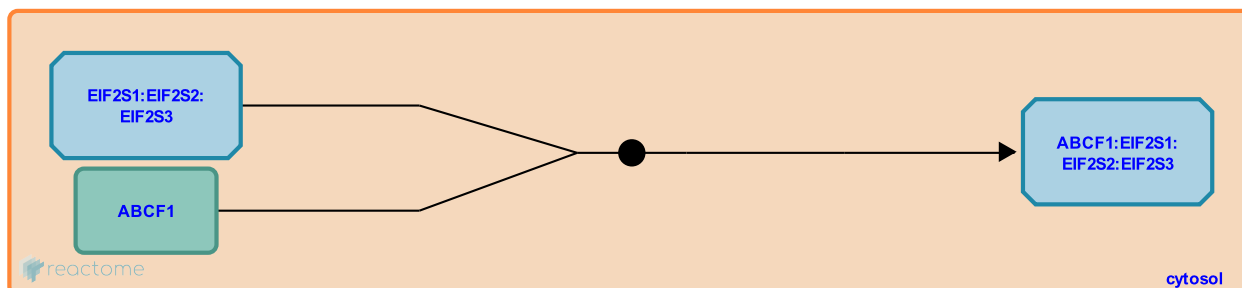
This document contains 1 reaction ([see Table of Contents](#))

ABCF1 binds EIF2 [↗](#)

Stable identifier: R-HSA-5227009

Type: binding

Compartments: cytosol



ATP-binding cassette sub-family F member 1 (ABCF1 aka ABC50) is unlike most ABC proteins in that it does not possess membrane-spanning domains. ABCF1 interacts with eukaryotic initiation factor 2 complex (EIF2S1:EIF2S2:EIF2S3), a key player in translation initiation and control and in ribosome regulation. ABCF1 is predominantly located in the cytosol, whereas a smaller amount is also found in the nucleoplasm but not in the nucleolus. Knockout of ABCF1 impaired translation of both cap-dependent and cap-independent reporters, consistent with a positive role for ABCF1 in the function of the EIF2 complex (Paytubi et al. 2008, Paytubi et al. 2009).

Literature references

Paytubi, S., Wang, X., Lam, YW., Izquierdo, L., Hunter, MJ., Jan, E. et al. (2009). ABC50 promotes translation initiation in mammalian cells. *J. Biol. Chem.*, 284, 24061-73. [↗](#)

Paytubi, S., Morrice, NA., Boudeau, J., Proud, CG. (2008). The N-terminal region of ABC50 interacts with eukaryotic initiation factor eIF2 and is a target for regulatory phosphorylation by CK2. *Biochem. J.*, 409, 223-31. [↗](#)

Editions

2014-01-09	Authored, Edited	Jassal, B.
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