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| Title: | Does genome surveillance explain the global discrepancy between binding and effect of chromatin factors? |
| Authors: | Singh, Arashdeep (/jspui/browse?type=author&value=Singh%2C+Arashdeep) Choudhuri, P. (/jspui/browse?type=author&value=Choudhuri%2C+P.) Chandradoss, K.R. (/jspui/browse?type=author&value=Chandradoss%2C+K.R.) Lal, Mohan (/jspui/browse?type=author&value=Lal%2C+Mohan) Mishra, Shravan Kumar (/jspui/browse?type=author&value=Mishra%2C+Shravan+Kumar) Sandhu, K.S. (/jspui/browse?type=author&value=Sandhu%2C+K.S.) |
| Keywords: | Chromatin remodeling DNA repair Genome integrity Transcription |
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| Publisher: | Federation of European Biochemical Societies |
| Citation: | FEBS Letters 594(8), pp.1339-1353. |
| Abstract: | Knocking out a chromatin factor often does not alter the transcription of its binding targets. What explains the observed disconnect between binding and effect? We hypothesize that this discrepancy could be associated with the role of chromatin factors in maintaining genetic and epigenetic integrity at promoters, and not necessarily with transcription. Through re-analysis of published datasets, we present several lines of evidence that support our hypothesis and deflate the popular assumptions. We also tested the hypothesis through mutation accumulation assays on yeast knockouts of chromatin factors. Altogether, the proposed hypothesis presents a simple explanation for the global discord between chromatin factor binding and effect. Future work in this direction might fortify the hypothesis and elucidate the underlying mechanisms. |
| URI: | https://febs.onlinelibrary.wiley.com/doi/full/10.1002/1873-3468.13729 (https://febs.onlinelibrary.wiley.com/doi/full/10.1002/1873-3468.13729) http://hdl.handle.net/123456789/3340 (http://hdl.handle.net/123456789/3340) |
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