

Retraction: Regulation of MBD1-mediated transcriptional repression by SUMO and PIAS proteins

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Retraction of: *The EMBO Journal* (2006) 25: 5317-5328. DOI 10.1038/sj.emboj.7601404 | Published online 26 October 2006

The above article, published online on October 26, 2006, in *The EMBO Journal*, has been retracted.

Journal statement

On March 15, 2019, the University of Edinburgh shared the report from a recent institutional investigation into research misconduct by Irina Stancheva with *The EMBO Journal*, which concluded that this study is compromised due to off-target specificity of the monoclonal antibody used in the study (IMG-306), which was described to target MBD1 in the paper. The report of the University of Edinburgh consequently suggested retraction of the paper.

The institutional report indicates that the antibody specificity issue was raised by Matthew Lyst with university representatives in 2009. The report states “another issue that had arisen in the Stancheva laboratory . . . was the use of a commercial monoclonal antibody with claimed specificity against the MBD1 protein, . . . which was in fact found to specifically detect a different protein.” The report details further that, after Matthew Lyst was not able to reproduce data, a senior member of the institute provided independent experiments to address the specificity issue that support the conclusion that the antibody recognizes another epitope on a protein of a similar MW (CPSF6). The journal was given access to a summary of these data.

Irina Stancheva noted that the experiments performed by Matthew Lyst used IMG-306 purchased from a different supplier, which may have lacked MBD1 specificity and maintains that the data in this paper were conclusive and in part reproduced by Hendriks et al (2015), *Cell Reports*, <https://doi.org/10.1016/j.celrep.2015.02.033>.

Matthew Lyst states, “IMG-306 obtained from different suppliers reacts with a band of the molecular weight of CPSF6 rather than MBD1.”

In addition to the concerns about the antibody specificity, the journal detected image aberrations in multiple figure panels. In the journal’s view, aberrations in Figures 1A, B, D, G; 2C; 4A-E, 5A, B D; 6C; S2C; and S5B S7 and S7 can be classed as “beautification,” based on apparently unmodified source data provided by Irina Stancheva upon request of the journal. This supports the claim that the data and conclusions from these panels are authentic. However, image aberrations in two additional panels showed signs consistent with image manipulation and could not be supported by compelling source data. The source data supplied for Figures 1C and 6B are included for reference with this retraction notice. Specifically, these issues include band insertions in Figure 1C and the erasure of a band in the first lane of 6B (“no transfection”).

Matthew Lyst and Xinsheng Nan agree with this notice. Irina Stancheva disagrees with this notice.

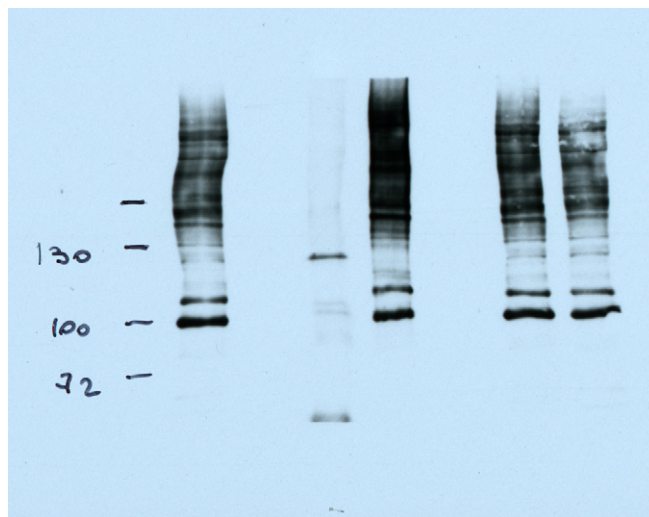
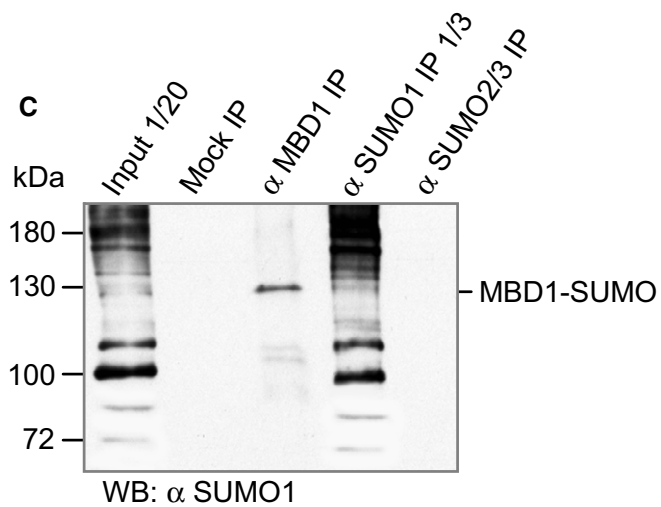


Figure 1C. Figure 1C (left) and the related source data (right).

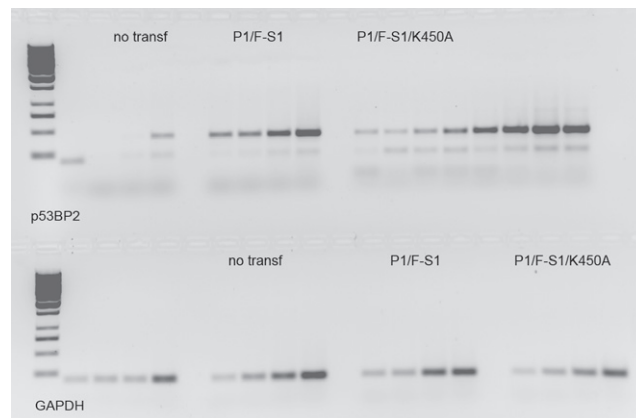
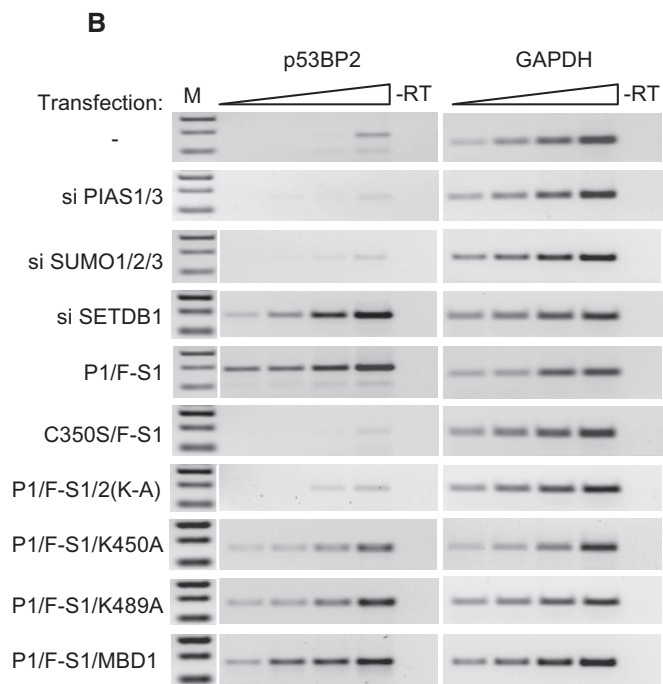


Figure 6B. Figure 6B (left) and the related source data (right).