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Processing of the abasic sites clustered with the benzo[*a*]pyrene adducts by the base excision repair enzymes

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Highlights

> We examine the structure of APE1 complex with DNA containing clustered damages.
> Relative positions of AP site and B[*a*]P adduct have high impact in the APE1 active center geometry.
> Polβ inhibits the 3'→5' exonuclease activity of APE1.
> Functional cooperation of APE1 and Polβ in the base excision repair is demonstrated.