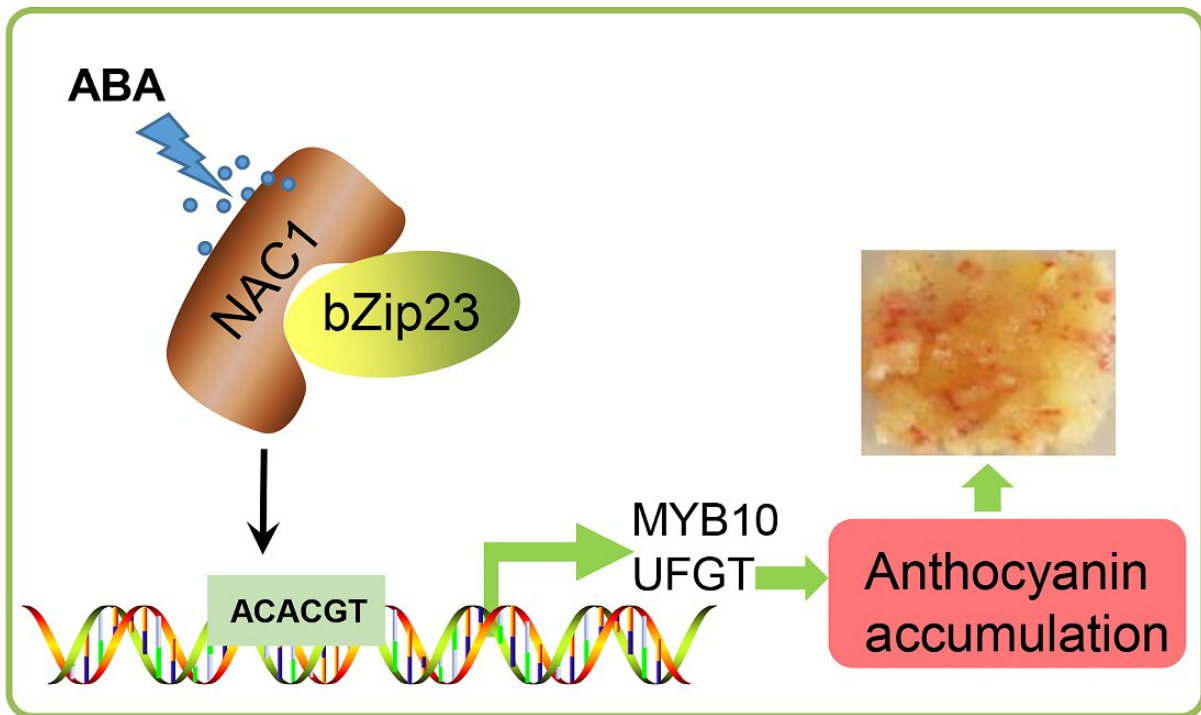


# Exploring the promotion of anthocyanin synthesis in red-fleshed apples

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MdNAC1 promotes anthocyanin accumulation through interaction with MdbZIP23. Credit: *Horticulture Research* (2023). DOI: 10.1093/hr/uhad049

Exploring the upstream transcription factors or proteins interacting with MdMYB10 is an important way to enrich the complex network of anthocyanin synthesis.

In a study published in the journal *Horticulture Research*, the upstream regulatory gene MdNAC1 of MdMYB10 was selected through [yeast](#) one hybridization experiments, and EMSA and LUC experiments showed that MdNAC1 can transcriptionally activate MdMYB10. The transformation experiments in apple callus and apple fruit showed that MdNAC1 significantly promoted the accumulation of anthocyanins.

At the same time, researchers have found that MdNAC1 can interact with MdbZIP23 [transcription factors](#), which enhances the transcriptional activation of MdMYB10 and the structural gene MdUFGT. Further research has found that MdNAC1 can be strongly induced by ABA. In the presence of ABA, the ability of MdNAC1 to promote anthocyanin synthesis is further enhanced.

In summary, this study clarified how MdNAC1 affects anthocyanin accumulation, and further demonstrated the regulatory role of ABA signals on anthocyanin accumulation in red-fleshed apples. This study provides a theoretical basis for exploring the relationship between ABA hormone signals and [anthocyanin](#) synthesis pathways.

**More information:** Wenjun Liu et al, The ABA-induced NAC transcription factor MdNAC1 interacts with a bZIP-type transcription factor to promote anthocyanin synthesis in red-fleshed apples, *Horticulture Research* (2023). [DOI: 10.1093/hr/uhad049](https://doi.org/10.1093/hr/uhad049)

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