



PLANT SYNBIO AUSTRALIA

TRANSFORMING
AGRICULTURE AND
BIOMANUFACTURING
THROUGH PLANT
SYNTHETIC BIOLOGY

Gene editing at Plant SynBio Australia



plantsynbio.au

The Plant SynBio Australia platform offers targeted genome editing through indel generation, gene knock-outs, base editing and prime editing, enabling both gene disruption and precise sequence modification tailored to crop improvement goals.

We also offer transgene-free genome editing, providing clean, safe, and regulatory-friendly solutions.

Plant SynBio Australia is funded through Bioplatforms Australia under the National Collaborative Research Infrastructure Strategy (NCRIS) and institutional partners



Gene editing

Genomic engineering is transforming plant science and Plant SynBio Australia (Plant SynBio) is delivering integrated, precision-driven solutions across the full spectrum of CRISPR-based technologies.

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Full service partner

As a full-service partner, Plant SynBio combines expertise in gRNA design, vector optimization, and rigorous validation to deliver reliable and high-confidence genome editing outcomes.



Our flexible workflows are fully customizable, whether you rely on our reagents or provide your own, allowing customers of all experience levels to achieve efficient, precise, and scalable results with confidence.

Research connections

Plant SynBio is part of Bioplatforms Australia, a national infrastructure network providing research facilities and expertise to support life science research tackling national challenges in health, agriculture, food, and biodiversity. This allows us to support an integrated approach to research projects spanning genomics, proteomics, metabolomics and bioinformatics projects.

As part of Australia's National Collaborative Research Infrastructure Strategy (NCRIS) we are connected with over \$4 billion worth of state-of-the-art infrastructure, data and expertise to help address complex research challenges. These connections include the Australian Plant Phenomics Network (APPN), the South Australian Genomics Centre (SAGC), the Australian Genome Research Facility (AGRF), Metabolomics Australia and Microscopy Australia.

Availability

Gene editing services are available through Plant SynBio Nodes at Adelaide University, ANU Canberra, La Trobe University Melbourne, and the University of Western Australia Perth.

Capabilities:

- **Comprehensive genome editing capabilities**, including standard and advanced platforms (CRISPR-Cas9, Cas12 systems, and base editing technologies, etc).
- **Diverse gene modification strategies** supporting plant synthetic biology applications (e.g. gene overexpression and fluorescent tagging).
- **Expertise in both transient and stable plant transformation** across a wide range of crops and horticultural species (e.g. wheat, barley, rice, canola, poplar, and almond).
- **Highly efficient transformation systems** tailored to multiple cultivars, including elite commercial varieties.

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