

Supplementary Table 2 Plant hormones regulate the regeneration system of medicinal plants

Abbreviations	Full name	Stability	Major role	Concentration range/(mg/L)	Source	Other effects
2,4-D	2,4-Dichlorophenoxyacetic acid	Stable	Commonly used for callus induction	0.005-0.010	Synthetic	Poor metabolic effect, easy to accumulate in cells and cause toxicity
IAA	Indole-3-acetic acid	It is easy to decompose when exposed to light and easy to damage under high pressure	It can induce callus, promote rooting and induce rooting, and the root is more robust, which is often used for callus induction	0.1-5.0	Natural hormone	Rooting is thin and weak
NAA	1-naphthalene acetic acid	Stable	Tissues are often induced to form embryos	Stem bud propagation: 0.1-1.0 Rooting propagation: 0.1-10.0	Synthetic	The rooting is short, thick and easy to break
IBA	Indole butyric acid	Relatively stable	Root induction, and the roots are more robust	0.1-10.0	Synthetic	
6-BA	6-Benzylaminopurine	Stable	Promote cell division and differentiation, induce callus formation, accumulate substances in organisms, and promote lateral bud formation	0.5-5.0	Synthetic	High concentration inhibits hair roots
ABA	Absciscic acid	Strong light is easy to decompose	Commonly used for callus induction	0.01-0.3	Natural hormone	Inhibiting cell growth
GA	Gibberellin	High voltage instability	Promote cell elongation, increase callus in culture, and break dormancy	0.1-5.0	Natural hormone	Inhibition of root, shoot and somatic cell genesis