TOKU-E

THE EVOLUTION OF BIOPURITY

Product Name:	6-Benzylaminopurine
Product Number:	B026
CAS Number:	1214-39-7
Molecular Formula:	$C_{12}H_{11}N_5$
Molecular Weight:	225.25
Form:	Powder
Appearance:	White powder
Solubility:	0.44mg/mL
Storage Conditions:	2-8 °C
Description:	6-Benzylaminopurine (BAP) is a first generation cytokinin plant growth regulator influencing plant growth and development. It is widely used as a supplement in plant growth media. It can inhibit respiratory kinase and increase past-harvest life of green vegetables. 6-Benzylaminipurine is sparingly soluble (0.44 mg/ml).
Mechanism of Action:	Cytokinins are involved in photosynthesis, nutrient assimilation, stress responses, and senescence. They are recognized by histidine kinases, and this signal triggers gene expression.
Plant Biology Applications	BAP is found primarily in plant roots and shoots where it induces gene expression involved in plant growth and development responses. It can induce premature flowering and increase the leaf and flower number in Dendrobium orchids (Nambiar et al. 2012).
	Somatic embryogenesis in wild rice (*Oryza perennis*) was induced from cultured mature seeds and young inflorescences. 6-Benzylaminopurine was used for induction of a compact callus and somatic embryos. Plant regeneration occurred on media containing BAP in combination with IAA and NAA (Wang et al, 1987).
References:	Nambiar N., Siang T.C. and Mahmood M. Effect of 6-Benzylaminopurine on flowering of a Dendrobium orchid. Australian Journal of Crop Science 6.2 (2012): 225-31.
	Wang, MS., Zapata, FJ. & De Castro, DC (1987) Plant regeneration through somatic embryogenesis from mature seed and young inflorescence of wild rice (*Oryza perennis* Moench). Plant Cell Rep. 6(4): 294-296 PMID 24248763
	Werner T and Schmülling T (2009) Cytokinin action in plant development. Curr. Opin. Plant Biol. 12(5):527-538 PMID 19740698