Gibberellic acid A3
PRODUCT DATA SHEET

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Product Name:	Gibberellic acid A3
Product Number:	G042
CAS Number:	77-06-5
Molecular Formula:	$C_{19}H_{22}O_6$
Molecular Weight:	346.37
Form:	Powder
Solubility:	soluble in aqueous solution
Source:	Gibberella fujikuroi
pH:	pKa 4.0
Melting Point:	233-235 °C
Storage Conditions:	2-8 °C
Description:	Gibberellic acid A3 is an endogenous plant growth regulator involved with plant growth, germination, elongation, and flowering. Bioactive diterpenes biosynthesized through complex pathways, gibberellins control diverse aspects of plant growth and development. The majority of genes that encode gibberellic acid biosynthesis have been identified.
Mechanism of Action:	Gibberellins are highly expressed in embryos. During this stage, starch serves as the primary energy source and is subsequently degraded by gibberellin-induced activity.
Plant Biology Applications	Gibberellic acid is used to promote cell division and cell elongation, seed germination and flowering in long-day plants (Raven et al., 1999). In addition to tissue culture applications, Gibberellic Acid is used in strawberry to control growth and flowering for out of season cropping (Paroussi et al., 2002).
Cancer Applications	The Gibberellin derivative 13-chlorine-3,15-dioxy-gibberellic acid methyl ester (GA-13315) was found to have antitumor and antiangiogenic activity in vitro and in vivo. IC50 values were 0.13-30.28 ug/ml in 12 human tumor cell lines, and 14.2 ug/ml in peripheral blood mononuclear cells. The antiangiogenic activity (reduced chemotactic motility and capillary-like tube formation) contributed to its anticancer properties (Zhang et al, 2012).

References:

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