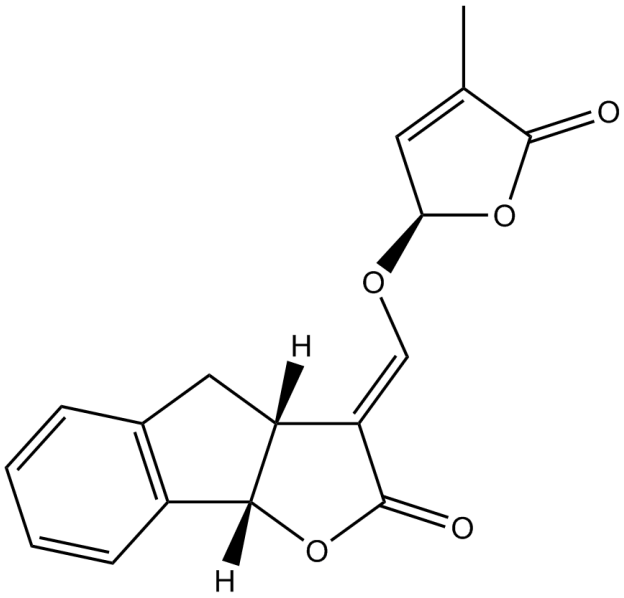
Product Information Sheet

G3324
(+/-)-*GR24*

Synonyms:	(rac)-GR24; [(±)-(3aR*,8bS*,E)-3-(((R*)-4-methyl-5-oxo-2,5-dihydrofuran-2-yloxy)methylene)-3,3a,4,8b-tetrahydro-2H-indeno[1,2-b]furan-2-one]
CAS:	76974-79-3
Formula:	$C_{17}H_{14}O_5$
Mol. Weight:	298.29 g/mol



Properties

Form:	Powder
Appearance:	White
Application:	Plant Growth Regulator
Solubility:	DMSO
Storage Temp:	-20°C
Typical Working Concentration:	Varies by application. Concentration should be determined by end user.

Application Notes

Strigolactones are a class of compounds derived from carotenoids that have recently been shown to inhibit lateral, secondary shoot branching and thus play a role in apical dominance (Gomez-Roldan *et al.* 2008; Umehara *et al.* 2008). (+/-)-*GR24* is a potent synthetic analogue of strigolactones that has been directly used in many of the founding studies. Transported from the root to the shoot, strigolactone hydrolysis leads to ubiquitination and destruction of *D53*, a protein necessary for axillary shoot development (Jiang *et al.* 2013; Zhou *et al.* 2013). It has been used to inhibit shoot branching in various plant species at concentrations of 0.15-1.5 mg/L (Brewer *et al.* 2009; Umehara *et al.* 2008).

Please Note: While *Phyto*Technology Laboratories™ tests each lot of this product with two or more plant cell/ tissue culture lines, it is the sole responsibility of the purchaser to determine the appropriateness of this product for the specific plants that are being cultured and applications that are being used.

References

Brewer, P.B., Dun, E.A., Ferguson, B.J., Rameau, C, and C.A. Beveridge (2009) Strigolactone Acts Downstream of Auxin to Regulate Bud Outgrowth in Pea and Arabidopsis. *Plant Physiology* Vol. 150 pg. 482-493.

Gomez-Roldan, V., Fermas, S., Brewer, P. B., Puech-Pagès, V., Dun, E. A., Pillot, J., Letisse, F., Matusova, R., Danoun, S., Portais, J., Bouwmeester, H., Bécard, G., Beveridge, C.A., Rameau, C. and S. F. Rochange (2008) Strigolactone inhibition of shoot branching. *Nature* Vol. 455 pg 189-194.

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M. Umehara, A. Hanada, S. Yoshida, K. Akiyama, T. Arite N. Takeda-Kamiya, H. Magome, Y. Kamiya, K. Shirasu, K. Yoneyama, J. Kyozuka and S. Yamaguchi (2008) Inhibition of shoot branching by new terpenoid plant hormones. *Nature* Vol. 455 pg. 195-200.

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