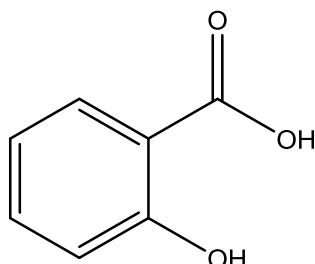




Product Information Sheet

S7530 Salicylic Acid



Synonym: 2-Hydroxybenzoic acid, SA
CAS: 69-72-7
Formula: C₇H₆O₃
Molecular Wt: 138.12

Properties

Form: Powder
Appearance: White to Off-White
Application: Plant Defense and Immunity
Solubility: 2.0 mg/mL water or at room temperature, 50 mg/mL in ethanol
Storage Temp: RT
Other Notes: Keep protected from light

Application Notes

In the early 1990s, SA was identified as an endogenous signaling chemical that accompanied systemic acquired response (SAR) (Métraux *et al.*, 1990). Since then, it has been found to be a master regulator of local and systemic defense responses in plants against pathogens (Loake and Grant, 2007).

SA is synthesized in plants through one of two pathways in different parts of the plant cell. The phenylpropanoid route occurs in the cytoplasm & the isochorismate pathway occurs in the chloroplast (Rivas-San Vicente and Plasencia, 2011).

SA has also been documented to induce flowering or flower bud formation in plants, specifically in tobacco callus at 4 µM concentration (Lee and Skoog, 1965), *Lemna gibba* (Cleland and Ajami, 1974), and multiple species in the Lemnaceae family at a concentration of 3-10 µM (Khurana and Cleland, 1992).

PhytoTechnology Laboratories®

P.O. Box 12205; Shawnee Mission, KS 66282-2205

Phone: 1-888-749-8682 or 1-913-341-5343; Fax: 1-888-449-8682 or 1-913-341-5442

Web Site: www.phytotechlab.com

© 2013 PhytoTechnology Laboratories®



Product Information Sheet

References

Merck 13 8411

Cleland CF, Ajami A. 1974. Identification of the flower-inducing factor isolated from aphid honeydew as being salicylic acid. *Plant Physiology* 54, 904–906.

Khurana JP, Cleland CF. 1992. Role of salicylic acid and benzoic acid in flowering of a photoperiod-insensitive strain, *Lemna paucicostata* LP6. *Plant Physiology* 100, 1541–1546.

Lee TT, Skoog F. 1965. Effect of substituted phenols on bud formation and growth of tobacco tissue culture. *Physiologia Plantarum* 18, 386–402.

Loake G, and M Grant. 2007. Salicylic acid in plant defence – the players and protagonists. *Curr Opin Plant Biol.* Vol 10 pg 466-472.

Métraux JP, Signer H, Ryals J, Ward E, Wyss-Benz M, Gaudin J, Raschdorf K, Schmid E, Blum W, and B. Inverardi. 1990. Increase in Salicylic Acid at the Onset of Systemic Acquired Response. *Science* Vol 250(4983) pg 1004-1006.

Rivas-San Vicente M. & Plasencia J. 2011. Salicylic acid beyond defence: Its role in plant growth and development. *J. Exp. Bot.* 62:3321–3338.

PhytoTechnology Laboratories®

P.O. Box 12205; Shawnee Mission, KS 66282-2205

Phone: 1-888-749-8682 or 1-913-341-5343; Fax: 1-888-449-8682 or 1-913-341-5442

Web Site: www.phytotechlab.com

© 2013 PhytoTechnology Laboratories®