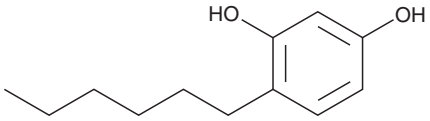
PRODUCT INFORMATION

4-Hexylresorcinol

Item No. 34824

CAS Registry No.:	136-77-6
Formal Name:	4-hexyl-1,3-benzenediol
Synonyms:	4-*n*-Hexylresorcinol, NSC 1570, *p*-Hexylresorcinol
MF:	$C_{12}H_{18}O_2$
FW:	194.3
Purity:	≥95%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Synthetic



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

4-Hexylresorcinol is supplied as a solid. A stock solution may be made by dissolving the 4-hexylresorcinol in the solvent of choice, which should be purged with an inert gas. 4-Hexylresorcinol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 4-hexylresorcinol in these solvents is approximately 30 mg/ml.

4-Hexylresorcinol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 4-hexylresorcinol should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. 4-Hexylresorcinol has a solubility of approximately 0.20 mg/ml in a 1:4 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

4-Hexylresorcinol is an alkylresorcinol that has been found in rye.[1] 4-Hexylresorcinol-containing lozenges are active against *S. aureus*, *S. pyogenes*, *M. catarrhalis*, *H. influenzae*, and *F. necrophorum* in an *in vitro* model of oral transmucosal delivery.[2] It increases the activities of glutathione peroxidase (GPX), glutathione reductase (GR), and catalase in isolated human peripheral blood lymphocytes when used at concentrations of 25, 50, or 100 µM.[3] 4-Hexylresorcinol (2.5 mg/kg) in combination with cisplatin (Item No. 13119) reduces tumor growth and increases survival in a patient-derived xenograft (PDX) mouse model of oral mucosal melanoma.[4] Formulations containing 4-hexylresorcinol have been used as food additives to prevent browning in produce and shrimp.

References

1. Mejbaum-Katzenellenbogen, W., Tłuścik, F., Kozubek, A., *et al*. Alkylresorcinols in rye (*Secale cereale* L.) grains. I. Micromethod for determination of alkyl derivatives of resorcinol in rye grain. *Acta Soc. Bot. Pol.* **44(4)**, 479-489 (2015).
2. Matthews, D., Adegoke, O., and Shephard, A. Bactericidal activity of hexylresorcinol lozenges against oropharyngeal organisms associated with acute sore throat. *BMC Res. Notes* **13(1)**, 99 (2020).
3. Yen, G.-C., Duh, P.-D., and Lin, C.-W. Effects of resveratrol and 4-hexylresorcinol on hydrogen peroxide-induced oxidative DNA damage in human lymphocytes. *Free Radic. Res.* **37(5)**, 509-514 (2003).
4. Lee, S.-W., Kim, S.-G., Park, Y.-W., *et al*. Cisplatin and 4-hexylresorcinol synergise to decrease metastasis and increase survival rate in an oral mucosal melanoma xenograft model: A preliminary study. *Tumour Biol.* **34(3)**, 1595-1603 (2013).

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