

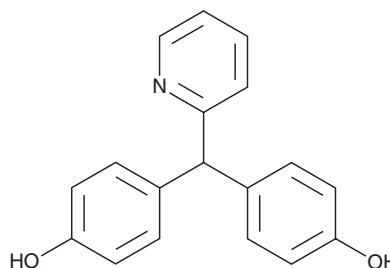
PRODUCT INFORMATION



Desacetyl Bisacodyl

Item No. 20928

CAS Registry No.: 603-41-8
Formal Name: 4,4'-(2-pyridinylmethylene)bis-phenol
Synonyms: DAB, DDPM
MF: C₁₈H₁₅NO₂
FW: 277.3
Purity: ≥98%
UV/Vis.: λ_{max}: 229, 267 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Desacetyl bisacodyl (DAB) is supplied as a crystalline solid. A stock solution may be made by dissolving the DAB in the solvent of choice, which should be purged with an inert gas. DAB is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of DAB in ethanol is approximately 2.5 mg/ml and approximately 30 mg/ml in DMSO and DMF.

DAB is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, DAB should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. DAB has a solubility of approximately 0.11 mg/ml in a 1:8 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

DAB is an active metabolite of two stimulant laxatives, bisacodyl and sodium picosulfate.^{1,2} DAB evokes several effects at the colon or rectum, including increased mucus and chloride secretion.^{3,4} Oral administration of bisacodyl leads to decreased expression of aquaporin-3 in the colon of rats.⁵ The effects of both DAB and bisacodyl can be blocked with cyclooxygenase (COX) inhibitors, suggesting that products of the COX signaling pathway contribute to laxative effects.^{4,5}

References

1. Friedrich, C., Richter, E., Trommehauser, D., *et al.* Absence of excretion of the active moiety of bisacodyl and sodium picosulfate into human breast milk: An open-label, parallel-group, multiple-dose study in healthy lactating women. *Drug Metab. Pharmacokinet.* **26(5)**, 458-464 (2011).
2. Jauch, R. Hankwitz, R., Beschke, K., *et al.* Bis-(p-hydroxyphenyl)-pyridyl-2-methane: The common laxative principle of Bisacodyl and sodium picosulfate. *Arzneimittel-Forschung* **25(11)**, 1796-1800 (1975).
3. Farack, U.M., Gruber, E., and Loeschke, K. The influence of bisacodyl and deacetyl-bisacodyl on mucus secretion, mucus synthesis and electrolyte movements in the rat colon *in vivo*. *Eur. J. Pharmacol.* **117(2)**, 215-222 (1985).
4. Fujita, T., Karaki, S.-i., Tateoka, T., *et al.* Desacetyl bisacodyl-induced epithelial Cl⁻ secretion in rat colon and rectum. *Biomed. Res.* **37(1)**, 13-20 (2016).
5. Ikarashi, N., Baba, K., Ushiki, T., *et al.* The laxative effect of bisacodyl is attributable to decreased aquaporin-3 expression in the colon induced by increased PGE2 secretion from macrophages. *Am. J. Physiol. Gastrointest. Liver Physiol.* **301(5)**, G887-G895 (2011).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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