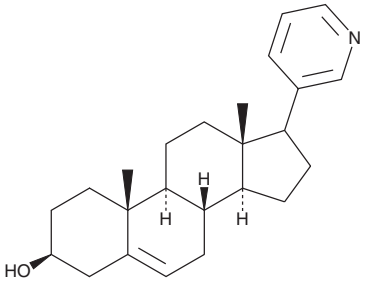
PRODUCT INFORMATION

Abiraterone

Item No. 9002768

CAS Registry No.:	154229-19-3
Formal Name:	(3β)-17-(3-pyridinyl)-androsta-5,16-dien-3-ol
Synonym:	CB-7598
MF:	$C_{24}H_{31}NO$
FW:	349.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 254 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

Abiraterone is supplied as a crystalline solid. A stock solution may be made by dissolving the abiraterone in the solvent of choice, which should be purged with an inert gas. Abiraterone is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of abiraterone in ethanol and DMF is approximately 15 mg/ml and approximately 1 mg/ml in DMSO.

Abiraterone is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, abiraterone should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Abiraterone has a solubility of approximately 0.3 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Abiraterone is an inhibitor of the cytochrome P450 (CYP) isoform CYP17A1 (IC_{50}s = 0.0029 and 0.004 µM for the 17,20-lyase and 17α-hydroxylase activities, respectively) and active metabolite of abiraterone acetate (Item No. 15148).[1,2] It is formed from abiraterone acetate by arylacetamide deacetylase.[3] Abiraterone is selective for CYP17A1 over aromatase and 5α-reductase (IC_{50}s = >20 and >50 µM, respectively).[1]

References

1. Potter, G.A., Barrie, S.E., Jarman, M., *et al.* Novel steroidal inhibitors of human cytochrome $P450_{17\alpha}$ (17α-hydroxylase-$C_{17,20}$-lyase): Potential agents for the treatment of prostatic cancer. *J. Med. Chem.* **38(13)**, 2463-2471 (1995).
2. Barrie, S.E., Potter, G.A., Goddard, P.M., *et al.* Pharmacology of novel steroidal inhibitors of cytochrome $P450_{17\alpha}$ (17α-hydroxylase/C17-20 lyase). *J. Steroid Biochem. Mol. Biol.* **50(5-6)**, 267-273 (1994).
3. Sakai, Y., Fukami, T., Nagaoka, M., *et al.* Arylacetamide deacetylase as a determinant of the hydrolysis and activation of abiraterone acetate in mice and humans. *Life Sci.* **284**, 119896 (2021).

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