

# Produktinformation



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# PRODUCT INFORMATION



### Abiraterone Acetate

Item No. 15148

CAS Registry No.: 154229-18-2

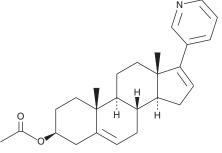
Formal Name: (3β)-17-(3-pyridinyl)-androsta-

5,16-dien-3-ol, acetate ester

Synonym: MF:  $C_{26}H_{33}NO_{2}$ FW: 391.6 **Purity:** ≥98% UV/Vis.:  $\lambda_{\text{max}}$ : 254 nm Supplied as: A crystalline solid

Storage: -20°C Stability: ≥2 years

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



#### **Laboratory Procedures**

Abiraterone acetate is supplied as a crystalline solid. A stock solution may be made by dissolving the abiraterone acetate in the solvent of choice, which should be purged with an inert gas. Abiraterone acetate is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of abiraterone acetate is approximately 16 mg/ml in ethanol and DMF and approximately 2 mg/ml in DMSO.

Abiraterone acetate is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, abiraterone acetate should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Abiraterone acetate 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 acetate is an inhibitor of the cytochrome P450 (CYP) isoform CYP17A1  $(IC_{50}s = 17 \text{ and } 18 \text{ nM for inhibition of } C_{17,20}$ -lyase and  $17\alpha$ -hydroxylase activities, respectively).<sup>1</sup> It is also a prodrug form of abiraterone (Item No. 9002768).<sup>2</sup> Abiraterone acetate reduces plasma testosterone levels, increases plasma luteinizing hormone levels, and reduces ventral prostate, seminal vesicle, testis, and kidney weight in mice when administered at doses of 0.1 and 0.5 mmol/kg per day. It also reduces severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) viral load in the culture supernatant of infected Vero E6 cells (EC<sub>90</sub> = 8.4  $\mu$ M) and is active in a plaque reduction assay (EC<sub>50</sub> = 1.94  $\mu$ M).<sup>3</sup> Formulations containing abiraterone acetate have been used in combination therapy for the treatment of metastatic castration-resistant prostate cancer.

#### References

- 1. Potter, G.A., Barrie, S.E., Jarman, M., et al. Novel steroidal inhibitors of human cytochrome P450<sub>17a</sub>  $(17\alpha$ -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<sub>17a</sub> (17a-hydroxylase/C17-20 lyase). J. Steroid Biochem. Mol. Biol. 50(5-6), 267-273 (1994).
- 3. Yuan, S., Chan, J.F.W., Chik, K.K.H., et al. Discovery of the FDA-approved drugs bexarotene, cetilistat, diiodohydroxyquinoline, and abiraterone as potential COVID-19 treatments with a robust two-tier screening system. Pharmacol. Res. 159(104960), (2020).

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

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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