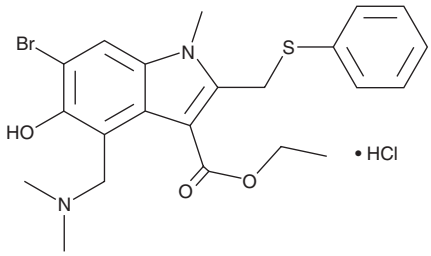
PRODUCT INFORMATION

Umifenovir (hydrochloride)

Item No. 16933

CAS Registry No.: 131707-23-8
Formal Name: 6-bromo-4-[(dimethylamino)methyl]-5-hydroxy-1-methyl-2-[(phenylthio)methyl]-1H-indole-3-carboxylic acid, ethyl ester, monohydrochloride
Synonym: Arbidol
MF: $C_{22}H_{25}BrN_2O_3S \bullet HCl$
FW: 513.9
Purity: ≥98%
UV/Vis.: λ_{max}: 225, 255, 315 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

Umifenovir (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the umifenovir (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Umifenovir (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of umifenovir (hydrochloride) in these solvents is approximately 10, 15, and 20 mg/ml, respectively.

Umifenovir (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, umifenovir (hydrochloride) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Umifenovir (hydrochloride) has a solubility of approximately 0.1 mg/ml in a 1:8 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Umifenovir is a broad-spectrum antiviral agent.[1] It inhibits the replication of H5N1 influenza (IC_{50} = 30 µg/ml) and severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) *in vitro* (IC_{50} = 3.537 µM).[1,2] Umifenovir inhibits entry of hepatitis C virus (HCV) pseudoparticles in Huh7 cells (IC_{50} = 6 µg/ml) and inhibits Zika virus protein synthesis in Vero cells.[1,3] *In vivo*, umifenovir (45 mg/kg) reduces the formation of influenza-induced lung lesions in ferrets.[4]

Reference

1. Boriskin, Y.S., Leneva, I.A., Pécheur, E.-I., *et al.* Arbidol: A broad-spectrum antiviral compound that blocks viral fusion. *Curr. Med. Chem.* **15(10)**, 997-1005 (2008).
2. Pizzorno, A., Padey, B., Dubois, J., *et al. In vitro* evaluation of antiviral activity of single and combined repurposable drugs against SARS-CoV-2. *Antiviral Res.* **181**, 104878 (2020).
3. Fink, S.L., Vojtech, L., Wagoner, J., *et al.* The antiviral drug arbidol inhibits Zika virus. *Sci. Rep.* **8(1)**, 8989 (2018).
4. Wang, Y., Ding, Y., Yang, C., *et al.* Inhibition of the infectivity and inflammatory response of influenza virus by Arbidol hydrochloride *in vitro* and *in vivo* (mice and ferret). *Biomed. Pharmacother.* **91**, 393-401 (2017).

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.

WARRANTY AND LIMITATION OF REMEDY
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CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM