# PRODUCT INFORMATION

## Umifenovir-$d_6$ (hydrochloride)

*Item No. 31494*

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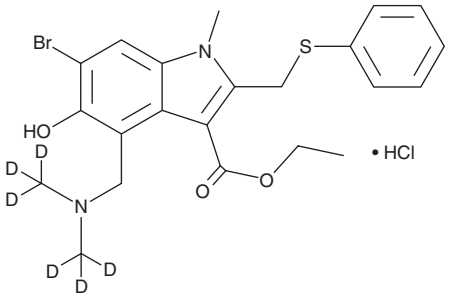
|---|---|
| **CAS Registry No.:** | 2928218-29-3 |
| **Formal Name:** | 6-bromo-4-[((dimethyl-$d_3$)amino)methyl]-5-hydroxy-1-methyl-2-[(phenylthio) methyl]-1H-indole-3-carboxylic acid, ethyl ester, monohydrochloride |
| **MF:** | $C_{22}H_{19}D_6BrN_2O_3S \bullet HCl$ |
| **FW:** | 519.9 |
| **Chemical Purity:** | ≥98% (Umifenovir) |
| **Deuterium Incorporation:** | ≥99% deuterated forms ($d_1$-$d_6$); ≤1% $d_0$ |
| **Supplied as:** | A 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-$d_6$ (hydrochloride) is intended for use as an internal standard for the quantification of umifenovir (Item No. 16933) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Umifenovir-$d_6$ (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the umifenovir-$d_6$ (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Umifenovir-$d_6$ (hydrochloride) is slightly soluble in chloroform and methanol.

### 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]

### References


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).





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