

Small Molecules

Arbidol

Blocks fusion between virus and target host cells

Catalog # 74002
74004

5 mg
10 mg



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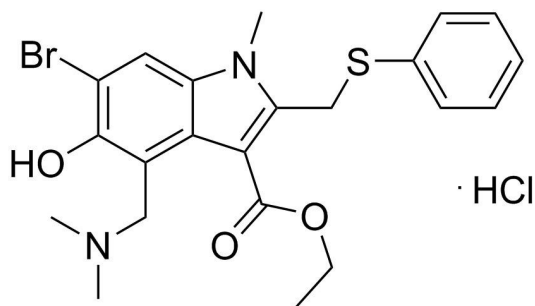
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Product Description

Arbidol is a broad-spectrum antiviral compound that blocks membrane fusion between virus and target host cells (Leneva et al.; Teissier et al.). It is effective against numerous viruses, including influenza A, B, and C, and hepatitis B and C, with IC_{50} values ranging from 3 - 12.5 $\mu\text{g/mL}$ (Boriskin et al.). This product is supplied as the hydrochloride salt of the molecule.

Molecular Name:	Arbidol (Hydrochloride)
Alternative Names:	Not applicable
CAS Number:	131707-23-8
Chemical Formula:	$\text{C}_{22}\text{H}_{25}\text{BrN}_2\text{O}_3\text{S} \cdot \text{HCl}$
Molecular Weight:	513.9 g/mol
Purity:	$\geq 98\%$
Chemical Name:	ethyl 6-bromo-4-[(dimethylamino)methyl]-5-hydroxy-1-methyl-2-(phenylsulfanylmethyl)indole-3-carboxylate;hydrochloride

Structure:



Properties

Physical Appearance:	A crystalline solid
Storage:	Product stable at -20°C as supplied. Protect product from prolonged exposure to light. For long-term storage store with a desiccant. Stable as supplied for 12 months from date of receipt.
Solubility:	\cdot DMSO ≤ 25 mM \cdot Absolute ethanol ≤ 15 mM For example, to prepare a 10 mM stock solution in DMSO, resuspend 1 mg in 195 μL of DMSO.

Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at -20°C . Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application.

Compound has low solubility in aqueous media. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.

Published Applications

DISEASE MODELING

- Reduces viral replication and acute inflammation through modulating the expression of inflammatory cytokines such as interleukin 1 β , interleukin 6, interleukin 12, and tumor necrosis factor- α (Liu et al.).

References

Boriskin YS et al. (2008) Arbidol: a broad-spectrum antiviral compound that blocks viral fusion. *Curr Med Chem* 15(10): 997–1005.

Leneva IA et al. (2009) Characteristics of arbidol-resistant mutants of influenza virus: Implications for the mechanism of anti-influenza action of arbidol. *Antiviral Res* 81(2): 132–40.

Liu Q et al. (2013) Antiviral and anti-inflammatory activity of arbidol hydrochloride in influenza A (H1N1) virus infection. *Acta Pharmacol Sin* 34(8): 1075–83.

Teissier E et al. (2011) Mechanism of inhibition of enveloped virus membrane fusion by the antiviral drug arbidol. *PLoS One* 6(1): e15874.

Related Small Molecules

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This product is hazardous. Please refer to the Safety Data Sheet (SDS).

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