

Small Molecules

GSK621

AMPK agonist

Catalog #100-0265
100-0266

1 mg
5 mg



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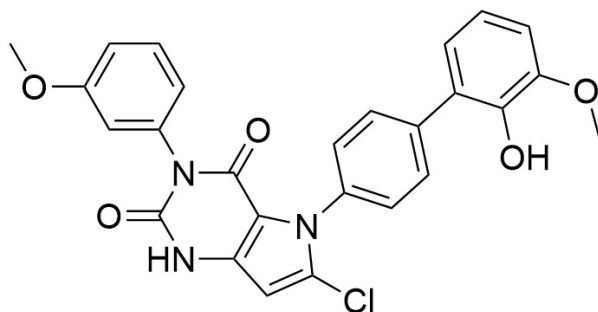
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Product Description

GSK621 is a specific agonist of AMP-activated protein kinase (AMPK; Sujobert et al.).

Molecular Name:	GSK621
Alternative Names:	Not applicable
CAS Number:	1346607-05-3
Chemical Formula:	C ₂₆ H ₂₀ ClN ₃ O ₅
Molecular Weight:	489.9 g/mol
Purity:	≥ 98%
Chemical Name:	6-chloro-5-(2'-hydroxy-3'-methoxy[1,1'-biphenyl]-4-yl)-3-(3-methoxyphenyl)-1H-pyrrolo[3,2-d]pyrimidine-2,4(3H,5H)-dione

Structure:



Properties

Physical Appearance:	A crystalline solid
Storage:	Product stable at -20°C as supplied. Protect from prolonged exposure to light. For long-term storage store with a desiccant. Stable as supplied for 12 months from date of receipt.
Solubility:	• DMSO ≤ 60 mM For example, to prepare a 10 mM stock solution in DMSO, resuspend 1 mg in 204 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

CANCER RESEARCH

- Increases AMPK α T172 phosphorylation, a marker of AMPK activation, in acute myeloid leukemia (AML) cells and primary AML samples (Sujobert et al.).
- Displays selective cytotoxicity (IC_{50} = 13 - 30 μ M) by activating autophagy via the eIF2 α signaling pathway independent of mTORC1 activation in AML cell lines but not in normal hematopoietic progenitor cells (Sujobert et al.).
- Inhibits human melanoma cell survival and proliferation (Chen et al.).

References

Chen L et al. (2016) AMPK activation by GSK621 inhibits human melanoma cells in vitro and in vivo. *Biochem Biophys Res Commun* 480(4): 515–21.

Sujobert P et al. (2015) Co-activation of AMPK and mTORC1 induces cytotoxicity in acute myeloid leukemia. *Cell Rep* 11(9): 1446–57.

Related Small Molecules

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