

Small Molecules

ID-8

DYRK pathway inhibitor

Catalog # 72502

5 mg



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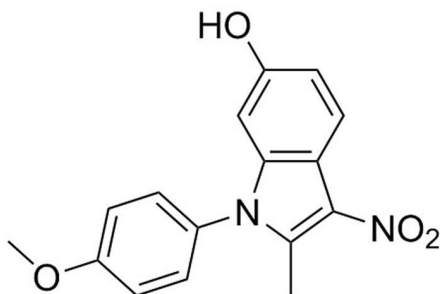
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Product Description

ID-8 is an indole derivative (Miyabayashi et al.) that inhibits dual-specificity tyrosine phosphorylation-regulated kinase (DYRK; Hasegawa et al.).

Molecular Name:	ID-8
Alternative Names:	Not applicable
CAS Number:	147591-46-6
Chemical Formula:	C ₁₆ H ₁₄ N ₂ O ₄
Molecular Weight:	298.3 g/mol
Purity:	≥ 98%
Chemical Name:	1-(4-methoxyphenyl)-2-methyl-3-nitro-1H-indol-6-ol
Structure:	



Properties

Physical Appearance:	A crystalline solid
Storage:	Product stable at -20°C as supplied. Protect from prolonged exposure to light. Stable as supplied for 12 months from date of receipt.
Solubility:	· DMSO ≤ 80 mM For example, to prepare a 10 mM stock solution in DMSO, resuspend 1 mg in 335 μL of fresh 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

MAINTENANCE AND SELF-RENEWAL

- Enables maintenance of mouse embryonic stem (ES) cells in the absence of mouse embryonic fibroblast feeder cells, serum, or LIF (Miyabayashi et al.).
- In combination with WNT, supports human ES cell proliferation and survival, without FGF or TGF- β (Hasegawa et al.).

References

- Hasegawa K et al. (2011) Wnt signaling orchestration with a small molecule DYRK inhibitor provides long-term xeno-free human pluripotent cell expansion. *Stem Cells Transl Med* 1(1): 18–28.
- Miyabayashi T et al. (2008) Indole derivatives sustain embryonic stem cell self-renewal in long-term culture. *Biosci Biotechnol Biochem* 72(5): 1242–8.

Related Small Molecules

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