

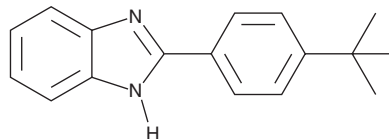
PRODUCT INFORMATION



ZLN005

Item No. 14121

CAS Registry No.: 49671-76-3
Formal Name: 2-[4-(1,1-dimethylethyl)phenyl]-1H-benzimidazole
MF: C₁₇H₁₈N₂
FW: 250.3
Purity: ≥98%
UV/Vis.: λ_{max}: 243, 305, 319 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

ZLN005 is supplied as a crystalline solid. A stock solution may be made by dissolving the ZLN005 in the solvent of choice, which should be purged with an inert gas. ZLN005 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of ZLN005 in ethanol is approximately 5 mg/ml and approximately 14 mg/ml in DMSO and DMF.

ZLN005 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ZLN005 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. ZLN005 has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Peroxisome proliferator-activated receptor-γ coactivator-1α (PGC-1α) is a tissue-specific and inducible transcriptional coactivator for several nuclear receptors and plays a key role in energy metabolism, hepatic gluconeogenesis, and cholesterol homeostasis.¹ ZLN005 is a small molecule that stimulates the expression of PGC-1α and downstream genes in skeletal muscle cells, improving glucose utilization and fatty acid oxidation at a concentration of 20 μM.² Chronic administration of 15 mg/kg/day ZLN005 to diabetic *db/db* mice increased PGC-1α and downstream gene transcription in skeletal muscle, increasing fat oxidation and improving glucose tolerance, pyruvate tolerance, and insulin sensitivity.²

References

1. Lin, J., Handschin, C., and Spiegelman, B.M. Metabolic control through the PGC-1 family of transcription coactivators. *Cell Metab.* **1(6)**, 361-370 (2005).
2. Zhang, L.-N., Zhou, H.-Y., Fu, Y.-Y., et al. Novel small-molecule PGC-1α transcriptional regulator with beneficial effects on diabetic *db/db* mice. *Diabetes* **62(4)**, 1297-1307 (2013).

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.

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