

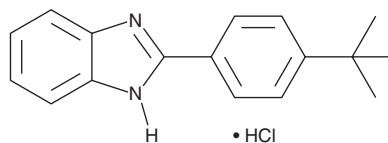
PRODUCT INFORMATION



ZLN005 (hydrochloride)

Item No. 9002449

Formal Name: 2-[4-(1,1-dimethylethyl)phenyl]-1H-benzimidazole, monohydrochloride
MF: C₁₇H₁₈N₂ • HCl
FW: 286.8
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 250, 303 nm



Laboratory Procedures

For long term storage, we suggest that ZLN005 (hydrochloride) be stored as supplied at -20°C. It should be stable for at least two years.

ZLN005 (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the ZLN005 (hydrochloride) in the solvent of choice. ZLN005 (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of ZLN005 (hydrochloride) in these solvents is approximately 25, 17, and 11 mg/ml, respectively.

ZLN005 (hydrochloride) is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. 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 This compound is the hydrochloride salt formulation of Item ZLN005 (Item No. 14121).

References

1. Lin, J., Handschin, C., and Spiegelman, B.M. Metabolic control through the PGC-1 family of transcription coactivators. *Cell Metab.* **1**, 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 (2012).

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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