

PRODUCT INFORMATION

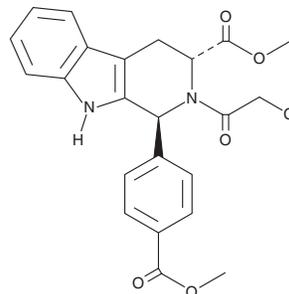


(1S,3R)-RSL3

Item No. 19288

CAS Registry No.: 1219810-16-8
Formal Name: (1S,3R)-2-(2-chloroacetyl)-2,3,4,9-tetrahydro-1-[4-(methoxycarbonyl)phenyl]-1H-pyrido[3,4-b]indole-3-carboxylic acid, methyl ester

MF: C₂₃H₂₁ClN₂O₅
FW: 440.9
Purity: ≥98%
UV/Vis.: λ_{max}: 220 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

(1S,3R)-RSL3 is supplied as a crystalline solid. A stock solution may be made by dissolving the (1S,3R)-RSL3 in the solvent of choice, which should be purged with an inert gas. (1S,3R)-RSL3 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of (1S,3R)-RSL3 in these solvents is approximately 10 mg/ml.

(1S,3R)-RSL3 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (1S,3R)-RSL3 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. (1S,3R)-RSL3 has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

(1S,3R)-RSL3 is an inhibitor of glutathione peroxidase 4 (GPX4) that induces a lethal accumulation of lipid hydroperoxides and ferroptotic cell death (EC₅₀ = 0.01 μM in HRAS^{V12}-expressing BJeHLT cells).¹⁻³ It is selective for HRAS^{V12}-expressing over wild-type BJeHLT cells (EC₅₀ = 2 μM).³ (1S,3R)-RSL3 reduces tumor volume in various mouse xenograft models, with diffuse large B cell lymphomas and renal cell carcinomas being most sensitive.

References

1. Kagan, V.E., Mao, G., Qu, F., *et al.* Oxidized arachidonic and adrenic PEs navigate cells to ferroptosis. *Nat. Chem. Biol.* **13**(1), 81-90 (2017).
2. Yang, W.S. and Stockwell, B.R. Ferroptosis: Death by lipid peroxidation. *Trends Cell Biol.* **26**(3), 165-176 (2016).
3. Yang, W.S., SriRamaratnam, R., Welsch, M.E., *et al.* Regulation of ferroptotic cancer cell death by GPX4. *Cell* **156**(1-2), 317-331 (2015).

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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