

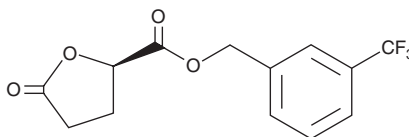
PRODUCT INFORMATION



TFMB-R-2-HG

Item No. 20461

CAS Registry No.: 1445700-01-5
Formal Name: (2R)-tetrahydro-5-oxo-2-furancarboxylic acid, [3-(trifluoromethyl)phenyl]methyl ester
MF: C₁₃H₁₁F₃O₄
FW: 288.2
Purity: ≥98%
UV/Vis.: λ_{max}: 264, 270 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

TFMB-R-2-HG is supplied as a crystalline solid. A stock solution may be made by dissolving the TFMB-R-2-HG in the solvent of choice, which should be purged with an inert gas. TFMB-R-2-HG is soluble in the organic solvent DMSO at a concentration of approximately 30 mg/ml.

Description

TFMB-R-2-HG is a cell-permeable form of (R)-2-hydroxyglutarate ((R)-2-HG).¹ (R)-2-HG is structurally similar to α-ketoglutarate and competitively inhibits α-ketoglutarate-dependent dioxygenases, including lysine demethylases and DNA hydroxylases.²⁻⁴ TFMB-R-2-HG has been used to assess the role of (R)-2-HG in leukemogenesis.¹

References

1. Losman, J.A., Looper, R.E., and Koivunen, P. (R)-2-hydroxyglutarate is sufficient to promote leukemogenesis and its effects are reversible. *Science* **339**(6127), 1621-1625 (2013).
2. Yang, H., Ye, D., Guan, K.L., et al. IDH1 and IDH2 mutations in tumorigenesis: Mechanistic insights and clinical perspectives. *Clin. Cancer Res.* **18**(20), 5562-5571 (2012).
3. Xu, W., Yang, H., Liu, Y., et al. Oncometabolite 2-hydroxyglutarate is a competitive inhibitor of α-ketoglutarate-dependent dioxygenases. *Cancer Cell* **19**(1), 17-30 (2011).
4. Chowdhury, R., Yeoh, K.K., Tian, Y.M., et al. The oncometabolite 2-hydroxyglutarate inhibits histone lysine demethylases. *EMBO Rep.* **12**(5), 463-469 (2011).

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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