

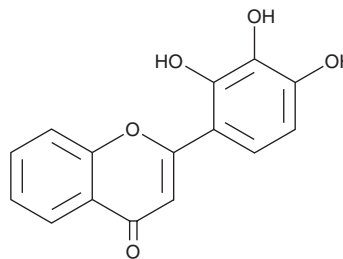
PRODUCT INFORMATION



2-D08

Item No. 20459

CAS Registry No.: 144707-18-6
Formal Name: 2-(2,3,4-trihydroxyphenyl)-4H-1-benzopyran-4-one
MF: C₁₅H₁₀O₅
FW: 270.2
Purity: ≥98%
UV/Vis.: λ_{max}: 221, 344 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

2-D08 is supplied as a crystalline solid. A stock solution may be made by dissolving the 2-D08 in the solvent of choice. 2-D08 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of 2-D08 in ethanol is approximately 1 mg/ml and approximately 30 mg/ml in DMSO and DMF.

2-D08 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 2-D08 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 2-D08 has a solubility of approximately 0.05 mg/ml in a 1:20 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

2-D08 is a synthetic flavone that inhibits sumoylation.¹ It completely inhibits sumoylation in microfluidic electrophoretic mobility shift and kinetic assays at a concentration of 30 μM. 2-D08 inhibits sumoylation of topoisomerase I in the breast cancer cell lines ZR-75-1 and BT-474.² It specifically disrupts the transfer of SUMO from the E2 enzyme (UBC9) thioester conjugate to the substrate. 2-D08 prevents amyloid-β (Aβ) (1-42) aggregation and Aβ-induced toxicity in PC12 cells.³ It also has antioxidant properties.⁴

References

1. Kim, Y.S., Keyser, S.G., and Schneekloth, J.S., Jr. Synthesis of 2',3',4'-trihydroxyflavone (2-D08), an inhibitor of protein sumoylation. *Bioorg. Med. Chem.* **24**(4), 1094-1097 (2014).
2. Kim, Y.S., Nagy, K., Keyser, S., et al. An electrophoretic mobility shift assay identifies a mechanistically unique inhibitor of protein sumoylation. *Chem. Biol.* **20**(4), 604-613 (2013).
3. Marsh, D.T., Das, S., Ridell, J., et al. Structure-activity relationships for flavone interactions with amyloid β reveal a novel anti-aggregatory and neuroprotective effect of 2',3',4'-trihydroxyflavone (2-D08). *Bioorg. Med. Chem.* **25**(14), 3827-3834 (2017).
4. Cotelle, N., Bernier, J.L., Hénichart, J.P., et al. Scavenger and antioxidant properties of ten synthetic flavones. *Free Radic. Biol. Med.* **13**(3), 211-219 (1992).

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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