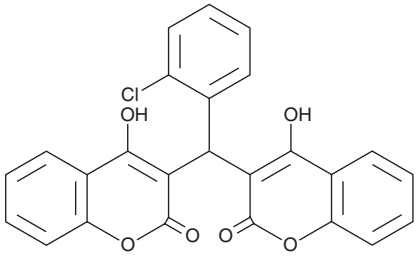
PRODUCT INFORMATION

3,3'-((2-Chlorophenyl)methylene)*bis*(4-hydroxy-2H-chromen-2-one)

Item No. 29864

CAS Registry No.:	4322-58-1
Formal Name:	3,3′-[(2-chlorophenyl)methylene]*bis*[4-hydroxy-2H-1-benzopyran-2-one]
MF:	$C_{25}H_{15}ClO_6$
FW:	446.8
Purity:	≥98%
UV/Vis.:	λ_{max}: 288, 310 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

3,3'-((2-Chlorophenyl)methylene)*bis*(4-hydroxy-2H-chromen-2-one) is supplied as a crystalline solid. A stock solution may be made by dissolving the 3,3'-((2-chlorophenyl)methylene)*bis*(4-hydroxy-2H-chromen-2-one) in the solvent of choice, which should be purged with an inert gas. 3,3'-((2-Chlorophenyl)methylene)*bis*(4-hydroxy-2H-chromen-2-one) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of 3,3'-((2-chlorophenyl)methylene)*bis*(4-hydroxy-2H-chromen-2-one) in these solvents is approximately 30 mg/ml.

3,3'-((2-Chlorophenyl)methylene)*bis*(4-hydroxy-2H-chromen-2-one) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 3,3'-((2-chlorophenyl)methylene)*bis*(4-hydroxy-2H-chromen-2-one) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 3,3'-((2-Chlorophenyl)methylene)*bis*(4-hydroxy-2H-chromen-2-one) has a solubility of approximately 0.14 mg/ml in a 1:7 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

3,3'-((2-Chlorophenyl)methylene)*bis*(4-hydroxy-2H-chromen-2-one) is a non-nucleotide inhibitor of ectonucleotide pyrophosphatase/phosphodiesterase 1 (ENPP1; K_i = 50 µM).[1,2] It also inhibits urease (IC_{50} = 84.53 µM for the Jack bean enzyme).[3]

References

1. Choudhary, M.I., Fatima, N., Khan, K.M., *et al.* New biscoumarin derivatives-cytotoxicity and enzyme inhibitory activities. *Bioorg. Med. Chem.* **14(23)**, 8066-8072 (2006).
2. Onyedibe, K.I., Wang, M., and Sintim, H.O. ENPP1, an old enzyme with new functions, and small molecule inhibitors - A STING in the tale of ENPP1. *Molecules* **24(22)**, E4192 (2019).
3. Khan, K.M., Iqbal, S., Lodhi, M.A., *et al.* Biscoumarin: New class of urease inhibitors; economical synthesis and activity. *Bioorg. Med. Chem.* **12(8)**, 1963-1968 (2004).

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