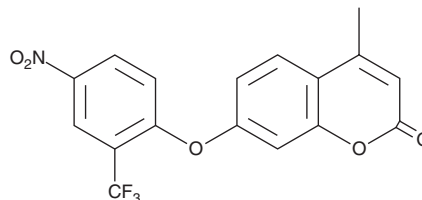


# PRODUCT INFORMATION

## 4-Methyl-7-(4-nitro-2-(trifluoromethyl)phenoxy)-2H-chromen-2-one

Item No. 28471

**CAS Registry No.:** 433254-36-5  
**Formal Name:** 4-methyl-7-[4-nitro-2-(trifluoromethyl)phenoxy]-2H-1-benzopyran-2-one  
**MF:** C<sub>17</sub>H<sub>10</sub>F<sub>3</sub>NO<sub>5</sub>  
**FW:** 365.3  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 286, 315 nm  
**Ex. Max:** 348 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

4-Methyl-7-(4-nitro-2-(trifluoromethyl)phenoxy)-2H-chromen-2-one is supplied as a crystalline solid. A stock solution may be made by dissolving the 4-methyl-7-(4-nitro-2-(trifluoromethyl)phenoxy)-2H-chromen-2-one in the solvent of choice, which should be purged with an inert gas. 4-Methyl-7-(4-nitro-2-(trifluoromethyl)phenoxy)-2H-chromen-2-one is soluble in organic solvents such as chloroform, DMSO, and dimethyl formamide (DMF). The solubility of 4-methyl-7-(4-nitro-2-(trifluoromethyl)phenoxy)-2H-chromen-2-one in chloroform and DMF is approximately 30 mg/ml and approximately 5 mg/ml in DMSO.

4-Methyl-7-(4-nitro-2-(trifluoromethyl)phenoxy)-2H-chromen-2-one is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 4-methyl-7-(4-nitro-2-(trifluoromethyl)phenoxy)-2H-chromen-2-one should first be dissolved in DMF and then diluted with the aqueous buffer of choice. 4-Methyl-7-(4-nitro-2-(trifluoromethyl)phenoxy)-2H-chromen-2-one has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

4-Methyl-7-(4-nitro-2-(trifluoromethyl)phenoxy)-2H-chromen-2-one is a turn-on fluorescent probe for the detection of hydrogen sulfide (H<sub>2</sub>S).<sup>1</sup> It can be excited at 348 nm in DMSO and fluorescence intensity increases in the presence of bisulfide (HS<sup>-</sup>). 4-Methyl-7-(4-nitro-2-(trifluoromethyl)phenoxy)-2H-chromen-2-one is selective for HS<sup>-</sup> over cysteine, AcO<sup>-</sup>, F<sup>-</sup>, H<sub>2</sub>PO<sub>4</sub><sup>-</sup>, Cl<sup>-</sup>, Br<sup>-</sup>, and I<sup>-</sup> and is not cytotoxic up to a concentration of 150 µg/ml.

### Reference

- Chen, Y., Shang, X., Li, C., *et al.* The synthesis, crystal, hydrogen sulfide detection and cell assement of novel chemsensors based on coumarin derivatives. *Sci. Rep.* **8**(1), 16159 (2018).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/01/2019

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM