

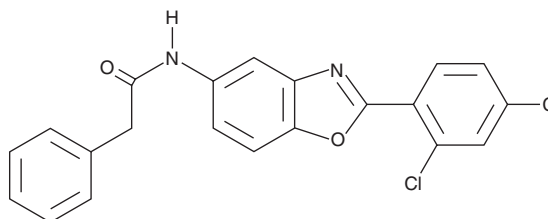
# PRODUCT INFORMATION



**CAY10722**

Item No. 22404

**CAS Registry No.:** 388086-13-3  
**Formal Name:** N-[2-(2,4-dichlorophenyl)-5-benzoxazolyl]-benzeneacetamide  
**MF:** C<sub>21</sub>H<sub>14</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>2</sub>  
**FW:** 397.3  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 211, 242, 315 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

CAY10722 is supplied as a crystalline solid. A stock solution may be made by dissolving the CAY10722 in the solvent of choice, which should be purged with an inert gas. CAY10722 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of CAY10722 in these solvents is approximately 10 mg/ml. CAY10722 is also slightly soluble in ethanol.

CAY10722 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, CAY10722 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. CAY10722 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

## Description

CAY10722 is an inhibitor of sirtuin 3 (SIRT3), a class III HDAC (71% inhibition at 200 μM).<sup>1</sup> SIRT3 is involved in modulating metabolic homeostasis as a NAD<sup>+</sup>-dependent protein deacetylase in the mitochondria. SIRT3 functions as either an oncogene or tumor suppressor, depending on cancer cell type.<sup>2,3</sup> High SIRT3 expression in patient-derived esophageal cancer tissues is associated with shorter survival and, in mice, downregulation leads to a lower tumor load.<sup>4</sup> In contrast, low SIRT3 expression in patient-derived breast cancer cells is correlated with shorter survival.<sup>5</sup>

## References

1. Salo, H.S., Latinen, T., Poso, A., *et al.* Identification of novel SIRT3 inhibitor scaffolds by virtual screening. *Bioorg. Med. Chem. Lett.* **23**(10), 2990-2995 (2013).
2. Chen, Y., Fu, LL., Wen, X., *et al.* Sirtuin-3 (SIRT3), a therapeutic target with oncogenic and tumor-suppressive function in cancer. *Cell Death Dis.* **5**, e1047 (2014).
3. Xiong, Y., Wang, M., Zhao, J., *et al.* Sirtuin 3: A Janus face in cancer (Review). *Int. J. Oncol.* **49**(6), 2227-2235 (2016).
4. Zhao, Y., Yang, H., Wang, X., *et al.* Sirtuin-3 (SIRT3) expression is associated with overall survival in esophageal cancer. *Ann. Diagn. Pathol.* **17**(6), 483-485 (2013).
5. Desouki, M.M., Doubinskaia, I., Gius, D., *et al.* Decreased mitochondrial SIRT3 expression is potential molecular biomarker associated with poor outcome in breast cancer. *Hum. Pathol.* **45**(5), 1071-1077 (2014).

### 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

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