

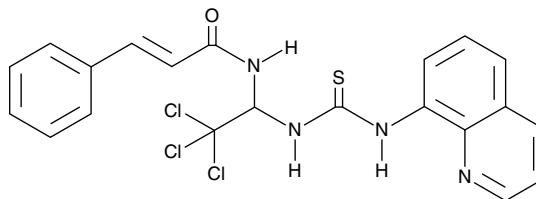
# Product Information



## Salubrial

Item No. 14735

**CAS Registry No.:** 405060-95-9  
**Formal Name:** (2E)-3-phenyl-N-[2,2,2-trichloro-1-[[[8-quinolinylamino)thioxomethyl]amino]ethyl]-2-propenamide  
**MF:** C<sub>21</sub>H<sub>17</sub>Cl<sub>3</sub>N<sub>4</sub>OS  
**FW:** 479.8  
**Purity:** ≥95%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid  
**UV/Vis.:** λ<sub>max</sub>: 216, 246, 275 nm



### Laboratory Procedures

For long term storage, we suggest that salubrial be stored as supplied at -20°C. It should be stable for at least two years.

Salubrial is supplied as a crystalline solid. A stock solution may be made by dissolving the salubrial in the solvent of choice. Salubrial is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of salubrial in these solvents is approximately 25 mg/ml.

Salubrial is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, salubrial should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Salubrial has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Salubrial is a selective phosphatase inhibitor that prevents dephosphorylation of eukaryotic translation initiation factor 2 subunit α (eIF2α), protecting PC12 cells from endoplasmic reticulum stress-mediated apoptosis (EC<sub>50</sub> = 15 μM).<sup>1,2</sup> It appears to block the action of protein phosphatase 1 (PP1) on eIF2α although it does not mimic calyculin A, another PP1-selective inhibitor, in toxicity or phosphorylation pattern.<sup>1</sup> Salubrial also prevents replication of herpes virus (IC<sub>50</sub> = 3 μM), by inhibiting dephosphorylation of eIF2α.<sup>1</sup> As eIF2α has a role in bone formation, salubrial is being studied for its effects in osteoporosis.<sup>3</sup>

### References

1. Boyce, M., Bryant, K.F., Jousse, C., *et al.* A selective inhibitor of eIF2α dephosphorylation protects cells from ER stress. *Science* **307**(5711), 935-939 (2005).
2. Long, K., Boyce, M., Lin, H., *et al.* Structure-activity relationship studies of salubrial lead to its active biotinylated derivative. *Bioorg. Med. Chem. Lett.* **15**(17), 3849-3852 (2005).
3. Yokota, H., Hamamura, K., Chen, A., *et al.* Effects of salubrial on development of osteoclasts and osteoblasts from bone marrow-derived cells. *BMC Musculoskelet. Disord.* **14**, 197 (2013).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/14735](http://www.caymanchem.com/catalog/14735)

**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

#### SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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