

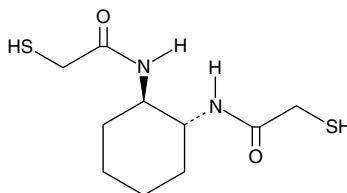
# Product Information



## (±)-*trans*-1,2-Bis(2-mercaptoacetamido)cyclohexane

Item No. 17249

**CAS Registry No.:** 257641-01-3  
**Formal Name:** *rel*-N,N'-(1R,2R)-1,2-cyclohexanediylbis[2-mercapto-acetamide]  
**Synonyms:** BMC, Vectrase P  
**MF:** C<sub>10</sub>H<sub>18</sub>N<sub>2</sub>O<sub>2</sub>S<sub>2</sub>  
**FW:** 262.4  
**Purity:** ≥98%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid



### Laboratory Procedures

For long term storage, we suggest that (±)-*trans*-1,2-bis(2-mercaptoacetamido)cyclohexane (BMC) be stored as supplied at -20°C. It should be stable for at least two years.

BMC is supplied as a crystalline solid. A stock solution may be made by dissolving the BMC in the solvent of choice. BMC is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of BMC in ethanol is approximately 2 mg/ml and approximately 20 mg/ml in DMSO and DMF.

BMC is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, BMC should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. BMC 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.

BMC is a cyclohexane with two mercaptoacetamido groups. It is used, both *in vitro* and *in vivo*, to promote the correct folding of proteins that require disulfide bonds for functionality.<sup>1,2</sup> For *in vitro* applications, BMC may be used to facilitate protein refolding of solubilized proteins from inclusion bodies.<sup>1,2</sup> Reducing agents, like dithiothreitol, may interfere with refolding. BMC may also be added to the growth medium of cells, including yeast cells, to enhance the folding of proteins with disulfide bonds *in vivo*.<sup>2</sup>

### References

1. Willis, M.S., Hogan, J.K., Prabhakar, P., *et al.* Investigation of protein refolding using a fractional factorial screen: A study of reagent effects and interactions. *Protein Sci.* **14**, 1818-1826 (2005).
2. Woycechowsky, K.J., Wittrup, K.D., and Raines, R.T. A small-molecule catalyst of protein folding *in vitro* and *in vivo*. *Chem. Biol.* **6**(12), 871-879 (1992).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/17249](http://www.caymanchem.com/catalog/17249)

**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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