



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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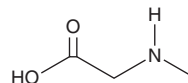
# PRODUCT INFORMATION



## Sarcosine

Item No. 26799

CAS Registry No.: 107-97-1  
Formal Name: N-methyl-glycine  
MF:  $C_3H_7NO_2$   
FW: 89.1  
Purity:  $\geq 95\%$   
Supplied as: A crystalline solid  
Storage:  $-20^{\circ}C$   
Stability:  $\geq 2$  years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Sarcosine is supplied as a crystalline solid. A stock solution may be made by dissolving the sarcosine in the solvent of choice, which should be purged with an inert gas. Sarcosine is slightly soluble in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of sarcosine can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of sarcosine in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Sarcosine is an intermediate in the biosynthesis of glycine from choline.<sup>1</sup> It is a selective inhibitor of glycine transporter 1 (GlyT1) with  $IC_{50}$  values of 91 and greater than 1,000  $\mu M$  for GlyT1 and GlyT2, respectively, in HEK293 cells expressing the human transporters.<sup>2</sup> Sarcosine levels are increased in prostate cancer cell lines with an invasive phenotype compared with non-invasive cell lines.<sup>3</sup> Sarcosine increases in a progressive fashion in prostate cancer with 0, 42, and 79% of benign, localized, and metastatic prostate tissue samples containing increased levels of sarcosine.

### References

1. Wang, W., Wu, Z., Dai, Z., *et al.* Glycine metabolism in animals and humans: Implications for nutrition and health. *Amino Acids* **45**(3), 463-477 (2013).
2. Herdon, H.J., Godfrey, F.M., Brown, A.M., *et al.* Pharmacological assessment of the role of the glycine transporter GlyT-1 in mediating high-affinity glycine uptake by rat cerebral cortex and cerebellum synaptosomes. *Neuropharmacology* **41**(1), 88-96 (2001).
3. Sreekumar, A., Poisson, L.M., Rajendiran, T.M., *et al.* Metabolomic profiles delineate potential role for sarcosine in prostate cancer progression. *Nature* **457**(7231), 910-914 (2009).

#### 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.

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