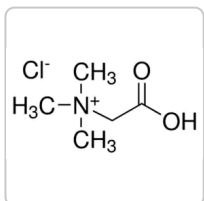


Type in Product Names, Product Numbers, or CAS Numbers to see suggestions.



[All Photos](#) (4)

Documents

[↓ SDS](#)

[🔍 COO/COA](#)

[📄 Specification Sheet](#)

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B3501 ▶ **Sigma-Aldrich®**

Betaine hydrochloride

★★★★★ (0)

≥99%

Synonym(s):

(Carboxymethyl)trimethylammonium hydrochloride

Linear Formula:

$(\text{CH}_3)_3\text{N}^+\text{CH}_2\text{COOH} \cdot \text{Cl}^-$

CAS Number: **590-46-5**

Molecular Weight: 153.61

Beilstein: 3916181

EC Number: **209-683-1**

MDL number: **MFCD00011903**

PubChem Substance ID: **24278266**

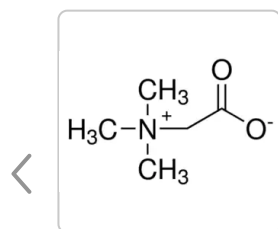
NACRES: NA.77

SKU	Pack Size	Availability	Price	Quantity		
B3501-100G	100 G	 Only 5 left in stock (more on the way) Details...	€34.60	— +		
B3501-250G	250 G	 Only 1 left in stock (more on the way) Details...	€36.40	— +		
B3501-1KG	1 KG	 Available to ship on October 10, 2022 Details...	€173.00	— +		

[Request a Bulk Order](#)

[Add to Cart](#)

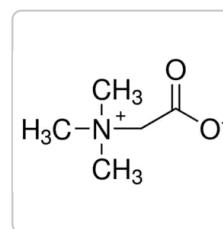
RECOMMENDED PRODUCTS



Sigma-Aldrich

61962**Betaine**

BioUltra, ≥99.0% (NT)

[View Price and Availability](#)

Sigma-Aldrich

B2629**Betaine**

≥98% (perchloric acid titration)

[View Price and Availability](#)

PROPERTIES

biological source

synthetic (organic)

Quality Level

100

assay

≥99%

form

powder or crystals

mp

241-242 °C (lit.)

solubility

water: 50 mg/mL, clear, colorless

storage temp.	room temp
SMILES string	<chem>[Cl-].C[N+](C)(C)CC(O)=O</chem>
InChI	1S/C5H11NO2.ClH/c1-6(2,3)4-5(7)8;/h4H2,1-3H3;1H
InChI key	HOPSCVCBEOCPJZ-UHFFFAOYSA-N
Gene Information	human ... BHMT(635) , BHMT2(23743)

Looking for similar products? Visit [Product Comparison Guide](#)

DESCRIPTION

General description

Betaine (trimethyl glycine) is an osmoprotectant, which is highly effective than proline. It is formed in from choline. Betaine is usually present in grains, spinach, beets, broccoli, shellfish and marine algae.

Application

Betaine hydrochloride has been used as a component of fixative in HEPES or cacodylate buffer to improve preservation of the ultrastructural morphology of human spermatozoa.

Packaging

100, 250 g in poly bottle

1 kg in poly bottle

Biochem/physiol Actions

Betaine hydrochloride can decrease hepatotoxicity, that is stimulated by ethanol.

End-product of oxidative metabolism of choline, betaine is a general methyl donor, in particular in a minor pathway of methionine biosynthesis. It is used to treat homocystinuria, which is a defect in the major pathway of methionine biosynthesis.

SAFETY INFORMATION

Pictograms



GHS05

Signal Word

Danger

Hazard Statements

H318

Precautionary Statements

P280 - P305 + P351 + P338 + P310

Hazard Classifications

Eye Dam. 1

Storage Class Code

11 - Combustible Solids

WGK

WGK 3

Flash Point(F)

Not applicable

Flash Point(C)

Not applicable

Personal Protective Equipment

dust mask type N95 (US),

Eyeshields, Gloves

DOCUMENTATION

Certificate of Analysis

Enter Lot Number to search for Certificate of Analysis (COA).

Lot Number

e.g. 023J5431

How to enter Lot Number (COA)**Search****Certificate of Origin**

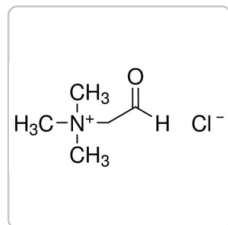
Enter Lot Number to search for Certificate of Origin (COO).

Lot Number

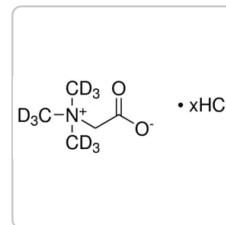
e.g. 023J5431

How to enter Lot Number (COO)**Search****More Documents**[FT-IR Condensed Phase](#)[Spectra - ATR-IR](#)[Spectra for FT-IR Raman](#)[Structure Search](#)[SDS](#)

CUSTOMERS ALSO VIEWED



Sigma-Aldrich

B3650**Betaine aldehyde chloride**[View Price and Availability](#)

Sigma-Aldrich

616656**Betaine-(*trimethyl-d9*) hydrochloride**

98 atom % D

[View Price and Availability](#)

PEER REVIEWED PAPERS

Improved preservation of ultrastructural morphology in human spermatozoa using betaine in the primary fixative

Swan MA

International Journal of Andrology, 20(1), 45- 54 (1997)

Can Phytochemicals be Effective in Preventing Ethanol-Induced Hepatotoxicity in the Geriatric Population? An Evidence-Based Revisit

Foods and Dietary Supplements in the Prevention and Treatment of Disease in Older Adults, 163- 170 (2015)

Effect of drying medium on the viability of dried

Selmer OE, et al.

Immobilized Cells: Basics and Applications, 11, 229-229 (1996)

Hepatocyte membrane potential regulates serum insulin and insulin sensitivity by altering hepatic GABA release.

Caroline E Geisler et al.

Cell reports, 35(13), 109298-109298 (2021-07-01)

Hepatic lipid accumulation in obesity correlates with the severity of hyperinsulinemia and systemic insulin resistance. Obesity-induced hepatocellular lipid accumulation results in hepatocyte depolarization. We have established that hepatocyte depolarization depresses hepatic afferent vagal nerve firing, increases GABA release from liver

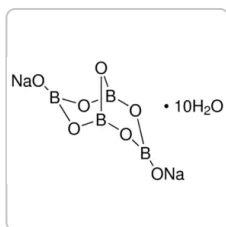
A New Subclass of Exoribonuclease-Resistant RNA Found in Multiple Genera of Flaviviridae.

Matthew J Szucs et al.
mBio, 11(5) (2020-10-01)

Viruses have developed innovative strategies to exploit the cellular machinery and overcome the antiviral defenses of the host, often using specifically structured RNA elements. Examples are found in the Flavivirus genus (in the family Flaviviridae), where during flaviviral infection, pathogenic

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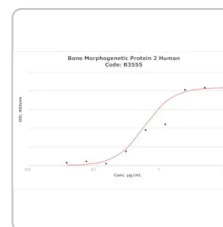
Sigma-Aldrich

B3545

Sodium tetraborate decahydrate

BioXtra, ≥99.5%

[View Price and Availability](#)



Sigma-Aldrich

B3555

Bone Morphogenetic Protein 2 human

≥98% (SDS-PAGE), recombinant, expressed in *E. coli*, lyophilized powder, suitable for cell culture

[View Price and Availability](#)

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TECHNICAL SERVICE

Our team of scientists has experience in all areas of research including Life Science, Material Science, Chemical Synthesis, Chromatography, Analytical and many others.

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