

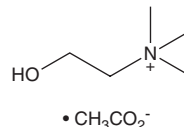
PRODUCT INFORMATION



Choline (acetate)

Item No. 43985

CAS Registry No.: 14586-35-7
Formal Name: 2-hydroxy-N,N,N-trimethyl-ethanaminium, monoacetate
MF: $C_5H_{14}NO \cdot C_2H_3O_2$
FW: 163.2
Purity: $\geq 98\%$
Supplied as: A 50% w/w solution in water
Storage: -20°C
Stability: ≥ 4 years



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

Description

Choline is an essential nutrient with roles in liver, neurological, hematological, and skeletal muscle homeostasis.¹⁻⁴ It is a precursor in the biosynthesis of membrane phospholipids, such as phosphatidylcholine, which facilitate cell signaling and transport across the membrane, and a precursor to the neurotransmitter acetylcholine. Choline is required for hepatic lipid transport.¹ Perinatal administration of choline (18.8 mg/kg) improves prenatal alcohol exposure-induced cognitive deficits in rats.² Choline (13 mg/animal per day) improves motor coordination and behavioral deficits in a mouse model of Rett syndrome, as well as improves deficits in recognition memory induced by early-life iron deficiency in rats when administered in the drinking water at a concentration of 5 ppm.³ Deficiencies in choline intake are positively correlated with muscle wasting, and dietary administration of choline (1,000 mg/kg) increases leg and breast muscle protein content in broiler chickens.⁴

References

1. Sanders, L.M. and Zeisel, S.H. Choline: Dietary requirements and role in brain development. *Nutr. Today* **42**(4), 181-186 (2007).
2. Thomas, J.D., Garrison, M., and O'Neill, T.M. Perinatal choline supplementation attenuates behavioral alterations associated with neonatal alcohol exposure in rats. *Neurotoxicol. Teratol.* **26**(1), 35-45 (2004).
3. Derbyshire, E. and Obeid, R. Choline, neurological development and brain function: A systematic review focusing on the first 1000 days. *Nutrients* **12**(6), 1731 (2020).
4. Moretti, A., Paoletta, M., Liguori, S., et al. Choline: An essential nutrient for skeletal muscle. *Nutrients* **12**(7), E2144 (2020).

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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