

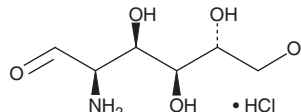
PRODUCT INFORMATION



D-Glucosamine (hydrochloride)

Item No. 27055

CAS Registry No.: 66-84-2
Formal Name: 2-amino-2-deoxy-D-glucose, monohydrochloride
Synonyms: D-(+)-Glucosamine, GlcN, NSC 234443, NSC 758
MF: C₆H₁₃NO₅ • HCl
FW: 215.6
Purity: ≥95%
Supplied as: A crystalline solid
Storage: 4°C
Stability: ≥4 years



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

Laboratory Procedures

D-Glucosamine (hydrochloride) is supplied as a crystalline solid. Aqueous solutions of D-glucosamine (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of D-glucosamine (hydrochloride) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

D-Glucosamine is an amino monosaccharide and a precursor in the biosynthesis of UDP-N-acetyl-D-glucosamine (UDP-GlcNAc; Item No. 20353) via the hexosamine pathway.^{1,2} It increases mineralization of MC3T3-E1 mouse osteoblastic cells when used at concentrations of 0.1 and 1 mM.³ D-Glucosamine (20 mg/kg per day) inhibits bone erosion and loss of glycosaminoglycans and proteoglycans in joints in a mouse model of collagenase-induced osteoarthritis.²

References

1. Anderson, J.W., Nicolosi, R.J., and Borzelleca, J.F. Glucosamine effects in humans: A review of effects on glucose metabolism, side effects, safety considerations and efficacy. *Food Chem. Toxicol.* **43(2)**, 187-201 (2005).
2. Ivanovska, N. and Dimitrova, P. Bone resorption and remodeling in murine collagenase-induced osteoarthritis after administration of glucosamine. *Arthritis Res. Ther.* **13(2)**, R44 (2011).
3. Igarashi, M., Sakamoto, K., and Nagaoka, I. Effect of glucosamine, a therapeutic agent for osteoarthritis, on osteoblastic cell differentiation. *Int. J. Mol. Med.* **28(3)**, 373-379 (2011).

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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