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ProductInformation

Magnesium chloride, Anhydrous

Product Number **M 8266**
Store at Room Temperature

Product Description

Molecular Formula: $MgCl_2$
Molecular Weight: 95.21
CAS Number: 7786-30-3

Magnesium chloride is a widely used reagent in chemistry and molecular biology as a source of magnesium ion. Magnesium has a variety of biological roles in enzymology, cell membrane and wall structural integrity, muscle cell physiology, and nucleic acid structure.[1,2] Magnesium is an essential co-factor in many enzymes, including deoxyribonuclease (DNAse), the restriction enzymes *Eco*R I and *Eco*R V, and Ribonuclease H.[3,4] Magnesium also stabilizes polymeric nucleic acids such as transfer RNA and ribozymes.[5]

Conditions for optimal use of $MgCl_2$ in the polymerase chain reaction (PCR) have been investigated.[6,7] The use of $MgCl_2$ in the trypsin-mediated proteolysis of the mammalian α-ketoglutarate dehydrogenase complex has been reported.[8] A protocol that includes $MgCl_2$ for dideoxy-mediated sequencing reactions using bacteriophage T7 DNA polymerase has been published.[9]

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions

This product is soluble in water (100 mg/ml), yielding a hazy, colorless solution.

References

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7. Henegariu, O., et al., Multiplex PCR: critical parameters and step-by-step protocol. Biotechniques, **23(3)**, 504-511 (1997).
8. McCartney, R.G., et al., Subunit interactions in the mammalian alpha-ketoglutarate dehydrogenase complex. Evidence for direct association of the α-ketoglutarate dehydrogenase and dihydrolipoamide dehydrogenase components. J. Biol. Chem., **273(37)**, 24158-24164 (1998).
9. Molecular Cloning: A Laboratory Manual, 3rd ed., Sambrook, J. and Russell, D.W., CSHL Press (Cold Spring Harbor, NY: 2001), pp. 12.32-12.37.

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