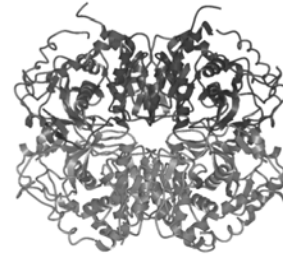


W0300

2.0 Å Crystal Structure of Muscle Lactate Dehydrogenase from Chicken Breast Tissue. J.M. Warfel^{1,2}, N Polder¹, S.R. Herron², C Srinivasan¹, K.A. Kantardjieff^{1,2}, ¹Dept. of Chemistry and Biochemistry, California State Univ., Fullerton, Fullerton, CA 92834, ²W. M. Keck Foundation Center for Molecular Structure, California State Univ., Fullerton.

Lactate dehydrogenase (LDH) is an oxidoreductase that interchangeably catalyzes the conversion of pyruvate and lactate using the redox properties of NADH and NAD⁺. Clinically, mutations of LDH have been found lethal during the post-implantation state of embryonic development and deficiencies of LDH have been associated with abnormal carbohydrate metabolism. Structurally, LDH-A from chicken breast muscle is an attractive subject molecule for establishing interspecific differences in kinetic and stability properties of LDHs. The 2.0 Å structure of *Gallus sp.* LDH has been determined by molecular replacement in space group P 2₁2₁2₁, with cell dimensions at 120 K of $a = 84.04 \text{ \AA}$, $b = 126.78 \text{ \AA}$, $c = 252.74 \text{ \AA}$ and two tetramers in the asymmetric unit. Calculated electron density suggests that the asymmetric unit may consist of two LDH isoforms or that there may be errors in the reported amino acid sequence.



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