Steroid hormones act via specific receptors which activate gene transcription. 17β-Hydroxysteroid dehydrogenases (17β-HSDs) are present in all vertebrates but even in primitive organisms such as bacteria, yeasts, and fungi. Part of the estrogens produced in women breast tissue are locally synthesized starting from precursors produced in other tissues. The contribution of 17β-HSD1 along the intracrine pathway is therefore essential in establishing high concentrations of E2 in breast tissues. We have undertaken a crystallographic study on a 17βHSD from the filamentous fungus Cochliobolus Lunatus, which shares common features with mammalian enzymes and could be important for the development of new synthetic inhibitors of 17βHSD1.
Structural studies on a fungal 17beta-hydroxysteroid dehydrogenase: a model system for a human enzyme


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