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Title:	Structural Analysis of 4- $\alpha$ -Glucanotransferase from <i>Pyrococcus Furiosus</i>
Authors:	Mehta, Gurkaran Singh (/jspui/browse?type=author&value=Mehta%2C+Gurkaran+Singh) Pandit, Shashi Bhushan (/jspui/browse?type=author&value=Pandit%2C+Shashi+Bhushan)
Keywords:	Biology 4- $\alpha$ -Glucanotransferase Enzyme <i>Pyrococcus furiosus</i> <i>Thermococcus litoralis</i>
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Abstract:	4- $\alpha$ -Glucanotransferase, an enzyme from <i>Pyrococcus furiosus</i> , catalyzes the hydrolysis of a glucose unit from a donor molecule, and transfers it to an acceptor molecule. The sequence of this enzyme is very much similar to 4- $\alpha$ -Glucanotransferase from <i>Thermococcus litoralis</i> . The donor and acceptor molecules are carbohydrates of varying length. The donor and acceptor sites are present within the enzyme only. The donor site is present in domain-I having catalytic residues Glutamate-124 and Aspartate-215, working in an acid-base catalysis kind of mechanism, similar in case of the enzyme from <i>Thermococcus litoralis</i> . The acceptor site is present in domain-II having interacting residues Histidine-369 and Arginine-372. The function of domain-III is not yet known.
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