Creative BioStructure

PRODUCT MANUAL OF THEM2 PROTEIN CRYSTAL

THEM2 Protein Crystal

Thioesterase superfamily member 2

Cat. No.	CBCRY16	
Background	The crystallographic structure of recombinant hTHEM2, determined by the single-wavelength anomalous dispersion method at 2.3A resolution, demonstrates that hTHEM2 indeed contains a hotdog-fold and forms a back-to-back tetramer as other hotdog proteins. Based on structural and sequence conservation, the thioesterase active site in hTHEM2 is predicted. The structure and substrate specificity are most similar to those of the bacterial phenylacetyl-CoA hydrolase. Asp65, located on the central alpha-helix of subunit B, was shown by site-directed mutagenesis to be essential to catalysis.	
Molecular description	Protein Classification	Hydrolase
	Structure Weight	132969.96 Da
	Polymer	1
	Molecule	Thioesterase superfamily member 2
	Chain Length	176 amino acids
Crystal Description	PDB ID	2F0X
	MMDB ID	42159
	Source	E.coli
	Method	X-Ray Diffraction
	Resolution	2.3Å
	Ligand Chemical Component	sulfate ion
Gene information	Gene Name	THEM2
	Synonyms	HT012; MGC4961; PNAS-27; 15 Kd protein; OTTHUMP00000016090; OTTHUMP00000039398; hypothalamus protein HT012
	UniProt ID	Q9NPJ3
	Gene ID	55856
	Chromosome Location	6p22.2
	Function	hydrolase activity
Reference	Cheng, Z., Song, F., Shan, X., Wei, Z., Wang, Y., Dunaway-Mariano, D., Gong, W. (2006) Crystal structure of human thioesterase superfamily member 2 Biochem.Biophys.Res.Commun. 349: 172-177	

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