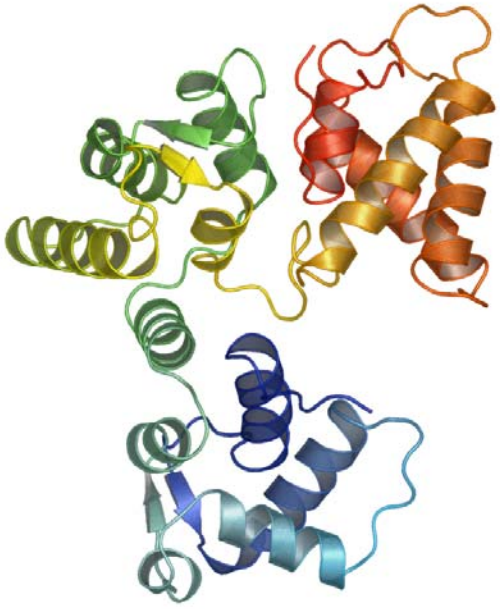
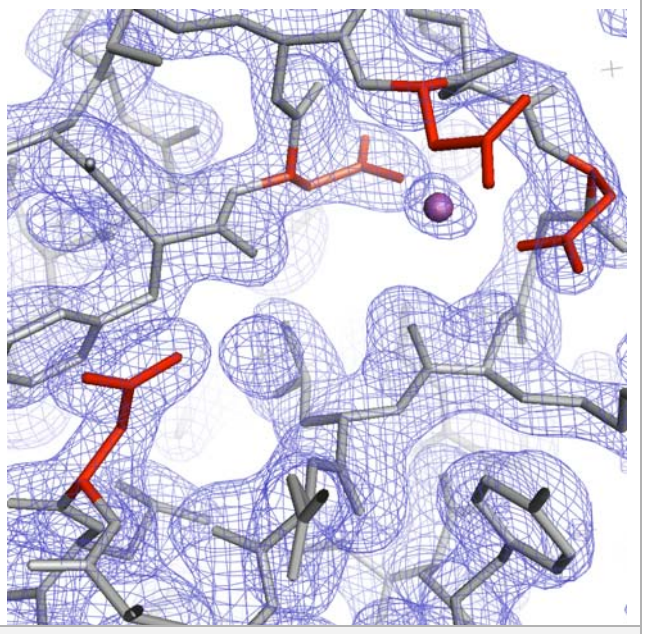
Center for Eukaryotic Structural Genomics

Protein Structure Initiative

Target ID	GO.74073	
Source Organism	*Danio rerio*	
Target Name	BC083168	
PDB Entry	2BE4	Deposition: 21-Oct-2005
Function	EF-hand protein from *Danio rerio* (FF/Refine: 2Q4U)	
Produced From	*E. coli* B834, pRARE2, pVP-16	
Structure by X-ray	Resolution: 2.10 Å	R-value (R-free): 17.6% (25.3%)
	No. of Residues/ASU: 270 (271)	Complexes/ASU: 1
Data Collected At	Advanced Photon Source SBC 22-ID 10-Oct-2005	
Authors	E. Bitto, C.A. Bingman, G.E. Wesenberg, G.N. Phillips, Jr.	





Structural Features

Dr.36843 encodes a novel hexa-EF-hand protein, showing 70% sequence identity to a human protein named "secretogorgin" (Uniprot 076038). Human secretagorgin is preferentially expressed in two tissues: islet cells of the pancreas and neuroendocrine cells. Analysis of the histochemical staining pattern of human secretagorgin revealed a striking neuron-specific cerebral expression pattern. Interestingly, the protein is detectable in human serum after ischemic strokes. This structure of the calcium-free form of *D. rerio* putative-secretagorgin reveals three independent domains, each of which contains a pair of EF-hand motifs, connected by short linkers.

Percent Identity with Nearest PDB Structure at Time Solved	1TCF (26% over 164 aa)
Pfam Cluster	Efhand (6) Dockerin_1, CMAS
Sequence Cluster Size : Structures in PDB	750 non-redundant genes at e<0.1

Center for Eukaryotic Structural Genomics (CESG), University of Wisconsin-Madison Biochemistry Department, 433 Babcock Drive, Madison, WI 53706-1549; phone: 608.263.2183; fax: 608.890.1942; email: cesginfo@biochem.wisc.edu; website: http://www.uwstructuralgenomics.org. This research funded by NIH / NIGMS Protein Structure Initiative grants U54 GM074901 and P50 GM064598.