

Adenylate and Guanylate Cyclase Catalytic Domains

ADCY5A	93	IYIQKHDNV	SILFADIEGFTSLASQCTA	---	QELVMTLNEL	FARFDKLA	---	ENHCLRIKIL	GDC																																							
ADCY1A	14	IYIQRHDNV	SILFADIVGFTGLASQCTA	---	QELVKLLNEL	FGKFDELAT	---	ENHCRRIKIL	GDC																																							
ADCY2A	281	LYVKRHTNV	SILYADIVGFTRLASDCSP	---	GELVHMLNEL	FGKFDQIAK	---	ENECMRIKIL	GDC																																							
ANPAR	867	VQAEAFDSV	TIYFSDIVGFTALSAESTP	---	MQVVTL	LNDLYTCF	DAVID	---	NFDVYKVEIL	GDA																																						
GUCY2D	871	VEPEYFEQ	VTLYFSDIVGFTTISAMSEP	---	IEVVDLL	NLDLYTL	FD	DAIIG	---	SHDVYKVEIL	GDA																																					
GUCYA3	472	VQAKKFSNV	TILFSDIVGFTAICSQCS	---	LQVITML	NALYTR	FD	QCG	---	ELDVYKVEIL	GDA																																					
ADCY5B	695	LYYQSC	CECVAVMFASIANFSEFYVELEANNEGVE	CLRL	LNEIIAD	FDEI	ISED	FR	QLEKIK	TIGST																																						
ADCY1B	579	LYYQSY	SQVGVMFASIPNFDFYIELDGNM	GMVE	CLRL	LNEIIAD	FDEL	ME	KDFYK	DIKIK	TIGST																																					
ADCY2B	878	LYHQSY	DCVCMFASIPDFKEFYTESDVNKEGLE	CLRL	LNEIIAD	FDDL	SK	PK	FS	GV	EKIK	TIGST																																				
ADCY5A	153	YYCVSGLP	-EARA	-----	DHAHCC	VEMGMD	MIEA	ISL	VREVT	--	GVNVNM																																					
ADCY1A	74	YYCVSGLT	-QPKT	-----	DHAHCC	VEMGLD	MIDT	ITS	V	AEAT	--	EVDLNM																																				
ADCY2A	341	YYCVSGLP	-ISLP	-----	NHAKNC	VKMGLD	MCEA	IKK	V	RDAT	--	GVDINM																																				
ANPAR	927	YMVVSGLP	PVRNGR	-----	LHACEV	ARMAL	ALLD	AVRS	FR	IRHP	QE	QLRL																																				
GUCY2D	931	YMASGLP	PQRNGQ	-----	RHAAE	IANMS	L	D	IL	SA	VG	TF	MR	HM	PE	VP	VRI																															
GUCYA3	532	YCVAGGL	HKESD	-----	THAVQ	I	AL	M	K	M	M	E	L	S	D	E	V	M	S	P	H	--	GEPIKM																									
ADCY5B	762	YMAASGL	NDST	-----	YDKV	G	K	T	-----	H	I	K	A	L	A	D	F	A	M	K	L	M	D	Q	M	K	Y	I	N	E	-	H	S	F	N	N	F	Q	-	M								
ADCY1B	646	YMAAVGL	APTS	-----	G	T	K	A	K	S	I	S	---	S	H	L	S	T	L	A	D	F	A	I	E	M	F	D	V	L	D	E	I	N	Y	-	Q	S	Y	N	D	F	V	-	L			
ADCY2B	945	YMAATGL	SAVP	-----	S	Q	E	H	S	Q	E	P	E	R	Q	Y	M	H	I	G	T	M	V	E	F	A	F	A	L	V	G	K	L	D	A	I	N	K	-	H	S	F	N	D	F	K	-	L
ADCY5A	195	RVGIHSG	R	VHCGVL	GLR	KWQ	FDV	WSND	V	T	L	A	N	H	M	E	A	G	G	K	A	G	R	I	H	I	T	240																				
ADCY1A	116	RVGLHT	G	RVLC	GV	GLR	KWQ	YDV	WSND	V	T	L	A	N	V	M	E	A	A	G	L	P	G	K	V	H	I	161																				
ADCY2A	383	RVGVHSG	N	VLC	GV	I	GLQ	KWQ	YDV	W	S	H	D	V	T	L	A	N	H	M	E	A	G	G	V	P	G	R	V	H	I	S	428															
ANPAR	972	RVGIHT	G	P	V	C	A	G	V	V	G	L	K	M	P	R	Y	C	L	F	G	D	T	V	N	A	S	R	M	E	S	N	G	E	A	L	K	I	H	L	S	1017						
GUCY2D	976	RIGLHSG	P	C	V	A	G	V	V	G	L	T	M	P	R	Y	C	L	F	G	D	T	V	N	A	S	R	M	E	S	T	G	L	P	Y	R	I	H	V	N	1021							
GUCYA3	574	RIGLHSG	S	V	F	A	G	V	V	G	V	K	M	P	R	Y	C	L	F	G	N	N	V	T	L	A	N	K	F	E	S	C	S	V	P	R	K	I	N	V	S	619						
ADCY5B	809	KIGLNIG	P	V	V	A	G	V	I	G	A	R	K	P	Q	Y	D	I	W	G	N	T	V	N	V	A	S	R	M	D	S	T	G	V	P	D	R	I	Q	V	T	854						
ADCY1B	697	RVGINV	G	P	V	V	A	G	V	I	G	A	R	R	Q	Y	D	I	W	G	N	T	V	N	V	A	S	R	M	D	S	T	G	V	Q	G	R	I	Q	V	T	741						
ADCY2B	998	RVGINH	G	P	V	I	A	G	V	I	G	A	Q	K	P	Q	Y	D	I	W	G	N	T	V	N	V	A	S	R	M	D	S	T	G	V	L	D	R	I	Q	V	T	1043					

**Dog Adenylate Cyclase V
C1A Domain**
(residues 445--661,
white)

**Rat Adenylate Cyclase
C2A Domain**
(residues 870-1082, light
grey)

Bovine G Protein G α
(residues 1-394, dark
grey)

PDB: 1CJK

