

# Cyclic Nucleotide Phosphodiesterase Catalytic Domains

PDE5A 577 RMFTDLNLVQNFQMKHEVLCRWILSVKKNYRK-NVAYHNWRHAFNTAQCMFAALKAGKR---[19 aa]-  
 PDE2A 621 SMLQDMNFINNYKIDCPTLARFCLMVKKGYRD--PPYHNWMHAFSVSHFCYLLYKNELELTN-----  
 PDE9A 277 HMYHDLGLVRDFSINPVTLRRWLFCVHDNYR--NPFHNRHCFCAQMMYSMVWLCSLQE-----  
 PDE1A 181 ELFTRYDLINRFKIPVSLITFAEAELEVGSKYKNPYHNLIAADVTQTVHYIMLHTGIMH-----  
 PDE3A 717 RLFEDMGLFEAFKIPIREFMNYFHALEIGYR--DIPYHNRIHATDVLHAVWYLTQPIPLG-[42 aa]-  
 PDE4A 397 MIFQERDLLKKFRIPVDMVTYMLTLEDHYH-ADVAYHNSLHAADVQLQSTHVLLATPALDA-----  
 PDE8A 520 KMFARFGICEFLHCSESTLRSWLQIIEANYH-SSNPYHNSTvSADVLHATAYFLSKERIKE-----

PDE5A 637 KLTDLIELALLIAALSHDLDRGVNNSNIQRSEHPLAQLYCH--SIMEHHHFDQCLMILN-SPGN  
 PDE2A 680 YLEDIEIFALFISCMCHDLDRGRTNNSFQVASKSVLAALYSSEGSVMERHHFAQAIALN-THGC  
 PDE9A 336 KFSQTDILILMTAAICHDLDPGYNNTNQINARTELAVRYN-DISPLENHHCVAFAFQILAEP-EC  
 PDE1A 242 WLTEIELAMVFAAAIHDYEHTGTTNFIHQTRSDVAILYN-DRSVLENHHVSAAYRLMQEE-EM  
 PDE3A 820 NIPALELMALYVAAAMHDYDHPGRNTAFLVATSAPQAVLYN-DRSVLENHHAAAANL FMSRPEY  
 PDE4A 457 VFTDLEILAALFAAAIHDVDHPGVSNQFLINTNSELALMYN-DESVLENHHLAVGFKLLQED-NC  
 PDE8A 580 TLDPIDEVAALIVATIHDVDHPGRNTSFLCNAGSELAAILYN-DTAVLESHHAALAFQLTTGDDKC

PDE5A 699 QILSGLSIEEYKTKLIKQAILATDLALYIKRRGEFF-----ELIRKNQFN  
 PDE2A 744 NIFDHF SRKDYQRM DL MRDIILATDLAHLRIFKDLQ-----KMAEVG-YD  
 PDE9A 399 NIFSNIPPDGFKQIRQGMITLILATDMARHAEIMDSFK-----EKMENFD  
 PDE1A 305 NILINLSKDDWRDLRNLVIEMVLSTDMSGHFQQIKNIR-----NSLQQPEGID  
 PDE3A 884 NFLINLDHVEFKHFRFLVIEAILATDLKKHFDFVAKFN-----GKVNDDVGDID  
 PDE4A 520 DIFQNL SKRQRQSLRKMVIDMVLATDM SKHMTLLADL KTMV-----ETKKVTSSGVLL  
 PDE8A 644 NIFKNMERNDYRTL RQGIIDMVLATEMTKHFHVNFV-[15 aa]-ETDKNQEVINTM

PDE5A 746 LEDPHQKELFLAMLMTACDLSAITKPWPIQQRIAEIVATEFFDQGDRE  
 PDE2A 790 RNNKQHHRLLLCLLMTSCDLSQDTKGWKTTRKIAELIYKEFFSQGDLE  
 PDE9A 444 YSNEEHMTLLKMILTKCCDISNEVRPMEVAEPWVDCLEEFYFMQSDRE  
 PDE1A 353 RAK-----TMSLILHAADISHPAKSWKLYRWTMALMEFFLQGDKE  
 PDE3A 932 WTNENDRLLVCQMCIKLADINGPAKCKELHLQWTDGIVNEFYEQGDDE  
 PDE4A 573 LDNYSDRIQVLRNMVHCADLSNPTKPLELYRQWTDRI MAEFFQQGDRE  
 PDE8A 708 L RTPENRTL I K R M L I K C A D V S N P C R P L Q Y C I E W A A R I S E E Y F S Q T D E E

PDE5A 794 RKELNIEPTDLMNREKKNKIPSMQVGFIDAI 824  
 PDE2A 838 K-AMGNRPMEMMDREK-AYIPELQISFMEHI 866  
 PDE9A 492 KSEGLPVA-PFMDRDK-VTKATAQIGFIK FV 520  
 PDE1A 395 AELGLPFS-PLCDRKS-TMVAQSQIGFIDFI 423  
 PDE3A 980 ASLGLPIS-PFMDRSA-PQLANLQESFISHI 1008  
 PDE4A 619 RERGMEIS-PMCDKHT-ASVEKSQVGFIDYI 649  
 PDE8A 756 KQQGLPVVMPVFD RNT-CSIPKSQISFIDYF 785

Human cGMP-Specific  
 3',5'-Cyclic  
 Phosphodiesterase  
 (residues 537-860, white)  
 Levitra (black)  
**PDB: 1UHO**

