

A

Identities = 237/528 (44%), Positives = 316/528 (59%), Gaps = 27/528 (5%)
Query 63

Hpa2c LDVSTKNPVRTVNENFLSQLQDPSIIHDG-WLDFLSSKRLVTLARGLSPAFLRFGGKRTD 121
LD T+ P+ V+ +FLS+ +D ++ D +L L S +L TLARGLSPA+LRFGG +TD
Hpa1 41 LDFFTQEPLHLVSPSFLSVTIDANLATDPRFILLGSPKIRTLARGLSPAYLRFGGTKTD 100

Hpa2c 122 FLQFQNLRNPAKSRRGGPGPDYYLKNYEDDI VRSDVALDKQKGCKIAQHPDVMLELQREKA 181
FL F +P K Y+ DI CK P+ E R+
Hpa1 101 FLIF---DPKKESTFEERSYWQSQVNQDI-----CKYGSIPPDVEEKLRLEW 144

Hpa2c 182 AQMHLVLLKEQFSNTYSNLILTARSLDKLYNFAADCSGLHLIFALNAXXXXXXXXXXXXX 241
+LL+E + + N + S+D LY FA+CSGL LIF LNAL R + WNSS+A
Hpa1 145 PYQEQLLLREHYQKKFKNSTYSRSSVVDVLYTFANCSGLDLIFGLNALLRTADLQWNSSNA 204

Hpa2c 242 XXXXXXXXXXXXNISWELGHEPNHYRTMHGRAVNGSQLGKDYLQLKSLLQPIRIYSRASL 301
LL Y +SK YNISWELGHEPN++ +NGSQLG+D+IQL LL+ + A L
Hpa1 205 QLLLDYCSSLKGYNISWELGHEPNSFLKKADIFINGSQLGEDFIQLHKLLRK-STFKNAKL 263

Hpa2c 302 YGPNIIGRPRKNVIALLDGFMKVAGSTVDAVTWQHCYIDGRVVVKVMDFLKTRILLDTLSQI 361
YGP++G+PR+ + L F+K G +D+VTW H Y++GR DFL +LD +
Hpa1 264 YGPDVGQPRRKTAKMLKSFLKAGGEVIDSVTWHHYLNQRTATREDFLNPDVLDIFISSV 323

Hpa2c 362 RKIQKVNVNTYTPGKKIWLEGVVITSAAGTNNLSDSYAAGFLWLNTLGMLANQGIDVVIRH 421
+K+ +VV + PGKK+WL + GG LSD++AAGF+WL+ LG+ A GI+VV+R
Hpa1 324 QKVFQVVESTRPGKKWLGETSSAYGGAPILLSDTFAAGFMWLDKLGLSARMGIEVVMRQ 383

Hpa2c 422 SFFDHGYNHLDQNFNP LPDYWLSLLYKRLIGPKVLAVHVAGLQRKPRPGRVIRDKLRIY 481
FF G HLVD+NF+PLPDYWLSLL+K+L+G KVL V G +R+ KLR+Y
Hpa1 384 VFFGAGNYHLVDENFDPLPDYWLSLLFKKLVGTKVLMASVQGSKRR-----KLRVY 434

Hpa2c 482 AHCTNHHHNHYVRGSITLFIINLHRSRKIKLAGTLRDKLVHQYLLQPYGQEGLKSNSVQ 541
HCTN H Y G +TL+ INLH K ++L +K V +YLL+P G GL SKSVQ
Hpa1 435 LHCTNTDNPRYKEGDLTLYAINLHNVTKYLRLPYPFSNKQVDKYLLRPLGPHGLLSNSVQ 494

Hpa2c 542 LNGQPLVMVDDGTLPELKPRPLRAGRTLVIIPPVIMGFFVVKNVNALAC 589
LNG L MVDD TLP L +PLR G +L +P + FFV++N AC
Hpa1 495 LNGITLKMVDDQTLPPPLMEKPLRPGSSLGLPAFSYSFFVIRNAKVAAC 542

B