

Table S1. Eukaryotic Linear Motifs (ELMs) of beta-Catenin

| Note | ELM name | Seq. | Start | END |
|-----------|------------------------------|-----------|-------|-----|
| | CLV_C14_Caspase3-7 | SYLDS | 29 | 33 |
| | CLV_NRD_NRD_1 | DRK | 17 | 19 |
| Confirmed | DEG_SCF_TRCP1_1 | DSGIHS | 32 | 37 |
| | DEG_SCF_TRCP1_1 | DSGIHS | 32 | 37 |
| | DOC_USP7_1 | AAVSH | 20 | 24 |
| | DOC_USP7_1 | AEPSQ | 126 | 130 |
| | LIG_Actin_WH2_2 | HPTNVQRLA | 118 | 135 |
| | LIG_BIR_II_1 | MATQA | 1 | 5 |
| | LIG_BRCT_BRCA1_1 | FSQSF | 70 | 74 |
| | LIG_BRCT_BRCA1_1 | PSTQF | 110 | 114 |
| | LIG_Clathr_ClatBox_1 | LMELD | 7 | 11 |
| | LIG_EH1_1 | KHAVVNLIN | 133 | 141 |
| | LIG_FHA_1 | VDTSQVL | 57 | 63 |
| | LIG_FHA_2 | MATQADL | 1 | 7 |
| | LIG_FHA_2 | PETLDEG | 100 | 106 |
| | LIG_FHA_2 | PSTQFDA | 110 | 116 |
| | LIG_SH2_SRC | YLDS | 30 | 33 |
| | LIG_SH2_STAT5 | YLDS | 30 | 33 |
| | LIG_TRAF2_1 | PEEE | 52 | 55 |
| | LIG_WD40_WDR5_VDV_2 TQADL | | 3 | 7 |
| | LIG_WD40_WDR5_VDV_2 TTTAPSL | | 40 | 46 |
| | LIG_WD40_WDR5_VDV_2 TQEQVADI | | 75 | 82 |
| | LIG_WD40_WDR5_VDV_2 TRAQRVRA | | 89 | 96 |
| | LIG_WD40_WDR5_VDV_2 YQDDAEL | | 142 | 148 |
| | MOD_CK1_1 | SGATTTA | 37 | 43 |
| | MOD_CK2_1 | FPETLDE | 99 | 105 |
| | MOD_GlcNHglycan | DSGI | 32 | 35 |
| | MOD_GlcNHglycan | HSGA | 36 | 39 |
| | MOD_GlcNHglycan | LSGK | 46 | 49 |
| | MOD_GSK3_1 | QQQSYLDS | 26 | 33 |
| Confirmed | MOD_GSK3_1 | YLDSGIHS | 30 | 37 |
| | MOD_GSK3_1 | YLDSGIHS | 30 | 37 |
| | MOD_GSK3_1 | QGFSQSFT | 68 | 75 |
| | MOD_NEK2_1 | FSQSFT | 70 | 75 |
| | MOD_PIKK_1 | VDTSQVL | 57 | 63 |
| | MOD_PIKK_1 | QGFSQSF | 68 | 74 |
| | MOD_PIKK_1 | QSFTQEQ | 72 | 78 |
| | MOD_PIKK_1 | IPSTQFD | 109 | 115 |
| | MOD_PIKK_1 | AEPSQML | 126 | 132 |
| | TRG_PEX_1 | WEQGF | 66 | 70 |
| | TRG_PEX_2 | FSQSF | 70 | 74 |
| | CLV_NRD_NRD_1 | RRT | 549 | 551 |
| | CLV_PCSK_KEX2_1 | RRT | 549 | 551 |
| | DOC_CYCLIN_1 | KLLHP | 496 | 500 |
| | DOC_PP2B_LxvP_1 | LHPP | 498 | 501 |
| | DOC_USP7_1 | PVDSV | 247 | 251 |

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|-------------|---------------------|----------|-----|-----|
| Confirmed | DOC_WW_Pin1_4 | IMRSPQ | 188 | 193 |
| | DOC_WW_Pin1_4 | MLGSPV | 243 | 248 |
| | DOC_WW_Pin1_4 | MLGSPV | 243 | 248 |
| | DOC_WW_Pin1_4 | LLYSPI | 602 | 607 |
| | LIG_14-3-3_2 | RGLNTIP | 591 | 597 |
| | LIG_14-3-3_3 | RTYTYE | 329 | 334 |
| | LIG_eIF4E_1 | YTYEKLL | 331 | 337 |
| | LIG_FHA_1 | QNTNDVE | 203 | 209 |
| | LIG_FHA_1 | LNTIPLF | 593 | 599 |
| | LIG_FHA_1 | PLTELLH | 639 | 645 |
| | LIG_FHA_2 | AATKQEG | 391 | 397 |
| | LIG_LIR_Gen_1 | TYTYEKL | 330 | 336 |
| | LIG_LIR_Nem_3 | TYTYEKL | 330 | 336 |
| | LIG_SH2_GRB2 | YGNQ | 306 | 309 |
| | LIG_SH2_STAT3 | YGNQ | 306 | 309 |
| | LIG_SH2_STAT5 | YTYE | 331 | 334 |
| | LIG_SUMO_SIM_par_1 | KVLSVCSS | 345 | 352 |
| | LIG_TRAF2_1 | TKQE | 393 | 396 |
| | LIG_TYR_ITIM | LLYSPI | 602 | 607 |
| | LIG_WD40_WDR5_VDV_2 | EAEGATA | 632 | 638 |
| | MOD_CK1_1 | SVCSSNK | 348 | 354 |
| | MOD_CK1_1 | SNLTCNN | 425 | 431 |
| | MOD_CK2_1 | HQLSKKE | 176 | 182 |
| | MOD_CK2_1 | DAATKQE | 390 | 396 |
| | MOD_CK2_1 | LLYSPIE | 602 | 608 |
| | MOD_CK2_1 | LLHSRNE | 643 | 649 |
| | MOD_GlcNHglycan | KSGG | 233 | 236 |
| | MOD_GlcNHglycan | ASGG | 317 | 320 |
| | MOD_GSK3_1 | DVETARCT | 207 | 214 |
| | MOD_GSK3_1 | MLGSPVDS | 243 | 250 |
| | MOD_GSK3_1 | KVLSVCSS | 345 | 352 |
| | MOD_GSK3_1 | RNLSDAAT | 386 | 393 |
| | MOD_GSK3_1 | HQDTQRRT | 544 | 551 |
| | MOD_GSK3_1 | EGATAPLT | 634 | 641 |
| | MOD_NEK2_1 | LNKTNV | 286 | 291 |
| | MOD_NEK2_1 | MGGTQQ | 553 | 558 |
| | MOD_NEK2_1 | LLHSRN | 643 | 648 |
| | MOD_N-GLC_1 | HNLSSH | 219 | 224 |
| | MOD_N-GLC_1 | LNKTNV | 286 | 291 |
| | MOD_N-GLC_1 | RNLSDA | 386 | 391 |
| MOD_N-GLC_1 | SNLTCN | 425 | 430 | |
| MOD_PIKK_1 | TDPSQRL | 371 | 377 | |
| MOD_PIKK_1 | HQDTQRR | 544 | 550 | |
| MOD_PIKK_1 | MGGTQQQ | 553 | 559 | |
| MOD_PK_1 | KVLSVCS | 345 | 351 | |
| Confirmed | MOD_PKA_1 | RRTSMGG | 549 | 555 |
| | MOD_PKA_1 | RRTSMGG | 549 | 555 |
| | MOD_PKA_2 | QRRTSMG | 548 | 554 |
| | MOD_ProDKin_1 | MLGSPVD | 243 | 249 |
| | MOD_ProDKin_1 | LLYSPIE | 602 | 608 |

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|-----------|---------------------|-----------|-----|-----|
| | TRG_ENDOCYTIC_2 | YSPI | 604 | 607 |
| | TRG_NES_CRM1_1 | EGMEGLLGT | 396 | 412 |
| | CLV_C14_Caspase3-7 | DLMDG | 761 | 765 |
| | CLV_PCSK_KEX2_1 | KRL | 672 | 674 |
| | CLV_PCSK_PC1ET2_1 | KRL | 672 | 674 |
| | DOC_CYCLIN_1 | KRLSV | 672 | 676 |
| | DOC_MAPK_1 | KKRLSVEL | 671 | 678 |
| | DOC_USP7_1 | PGDSN | 768 | 772 |
| | LIG_BIR_III_4 | DALGM | 727 | 731 |
| | LIG_BRCT_BRCA1_1 | TSSLF | 679 | 683 |
| | LIG_FHA_1 | ELTSSLF | 677 | 683 |
| | LIG_FHA_1 | NETADLG | 691 | 697 |
| | LIG_LIR_Nem_3 | DPSYRSF | 713 | 719 |
| Confirmed | LIG_PDZ_Class_1 | WFDTDL | 776 | 781 |
| | LIG_PDZ_Class_1 | WFDTDL | 776 | 781 |
| | LIG_SH3_5 | PGADY | 744 | 748 |
| | LIG_WD40_WDR5_VDV_1 | DLGLDI | 695 | 700 |
| | LIG_WD40_WDR5_VDV_2 | DYKKRLSV | 669 | 676 |
| | LIG_WD40_WDR5_VDV_2 | SVEL | 675 | 678 |
| | LIG_WD40_WDR5_VDV_2 | ETADL | 692 | 696 |
| | LIG_WD40_WDR5_VDV_2 | DLGLDI | 695 | 700 |
| | LIG_WD40_WDR5_VDV_2 | DGLPDL | 751 | 756 |
| | MOD_CK1_1 | SYRSFHS | 715 | 721 |
| | MOD_GlcNHglycan | HSGG | 720 | 723 |
| | MOD_GSK3_1 | KRLSVELT | 672 | 679 |
| | MOD_GSK3_1 | LTSSLFRT | 678 | 685 |
| | MOD_NEK2_1 | LTSSLF | 678 | 683 |
| | MOD_N-GLC_1 | WNETAD | 690 | 695 |
| | MOD_PK_1 | KRLSVEL | 672 | 678 |
| | MOD_PKA_1 | KRLSVEL | 672 | 678 |
| Confirmed | MOD_PKA_2 | KRLSVEL | 672 | 678 |
| | MOD_PKA_2 | FRMSEDK | 660 | 666 |
| | MOD_PKA_2 | KRLSVEL | 672 | 678 |
| | TRG_ENDOCYTIC_2 | YRSF | 716 | 719 |