**Table S3. Classification of (non-) CPPs based on chemical class, literature data and their uptake mechanisms.**

| Peptide ID | Peptide name | Chemical class[1] | CP-response | Ref. | Literature evaluation[2] | Comment | Uptake mechanism[3] | Comment |
|---|---|---|---|---|---|---|---|---|
| 1 | pVEC | AC | 1.318 | 17 | High CPP | - | 2 | Unspecified |
| | | | | 25 | CPP | ≥ penetratin | 1 and 2 | Unsure |
| | | | | 27 | CPP | > $(KFF)_3K$ and penetratin | Not available | - |
| | | | | 53 | CPP | ≥ MAP, > penetratin | Not available | - |
| | | | | 66 | CPP | = YTA2, > Tat 48-60, transportan 10, penetratin | 1 and 2 | Unspecified |
| 2 | Tat 48-60 | C | 0.221 | 17 | Medium CPP | - | 2 | Unspecified |
| | | | | 26 | CPP | < penetratin, APH (85-98), nicastrin (38-53) | 2a | - |
| | | | | 34 | CPP | = transportan 10, < penetratin < R11 | 2b | - |
| | | | | 38 | CPP | > VP22, < HIV Rev (34-50) and penetratin | 2a | - |
| | | | | 66 | CPP | = transportan 10, > Tat 48-60, < pVEC and YTA2 | 1 and 2 | Unspecified |
| 3 | APH-1 (85-98) | AU (AC) | 0.188 | 26 | CPP | > Tat 48-60, < penetratin and nicastrin (38-53) | 2a | - |
| 4 | APH-1 (236-246) | AU (AC) | 0.039 | 26 | No CPP | - | Not applicable | - |
| 5 | Nicastrin (38-53) | AU (AC) | 0.345 | 26 | CPP | > Tat 48-60, < penetratin and APH (85-98) | 2a | - |
| 6 | Nicastrin (414-434) | AU (C) | 0.016 | 26 | No CPP | - | Not applicable | - |
| 7 | Nicastrin (616-635) | AU (AC) | 0.031 | 26 | No CPP | - | Not applicable | - |
| 8 | Presenilin-1 (97-109) | AU (AC) | 0.008 | 26 | No CPP | - | Not applicable | - |
| 9 | Presenilin-1 (305-317) | AU (AC) | 0.016 | 26 | No CPP | - | Not applicable | - |
| 10 | D-pVEC | AC | 0.824 | 7 | CPP | ≈ pVEC | 2b > 2a | - |
| | | | | 27 | CPP | ≥ pVEC | Not available | - |
| | | | | 53 | CPP | ≥ pVEC | Not available | - |
| 11 | $(KFF)_3K$ | AU (AC) | 1.837 | 27 | CPP | Less efficient than pVEC because of degradation | Not available | - |
| *12* | *Transportan* | *AC* | *(4.357)* | *17* | *High CPP* | - | *2* | *Unspecified* |
| | | | | *28* | *CPP* | *> transportan 10* | *Not available* | - |
| | | | | *68* | *CPP* | - | *1* | *Unspecified* |
| 13 | Transportan 10 | AC | 1.641 | 28 | CPP | < transportan | Not available | - |
| | | | | 30 | CPP | > penetratin >> Tat 47-57 | Not available | - |
| | | | | 32 | CPP | < M918 | 2a and 2b | - |
| | | | | 34 | CPP | = Tat 48-60, < penetratin < R11 | Not available | - |
| | | | | 66 | CPP | = penetratin, > Tat 48-60, < pVEC and YTA2 | 1 and 2 | *Unspecified* |
| 14 | MAP | AC | 1.716 | 13 | CPP | - | 1 and 2 | - |
| | | | | 17 | High CPP | - | 2 | *Unspecified* |
| | | | | 29 | CPP | - | 1 and 2 | Unspecified |
| | | | | 37 | CPP | - | 1 and 2 | Unsure |
| | | | | 53 | CPP | ≥ pVEC, > penetratin | Not available | - |
| 15 | Syn B1 | AC | 0.063 | 17 | Medium CPP | - | 2 | Unspecified |
| | | | | 39 | CPP | - | 2c | - |
| 16 | Polyomavirus $Vp_1$ | AU (C) | 0.028 | 17 | Low CPP | Nearly unmeasurable uptake | 2 | Unspecified |
| 17 | Bac1-15 | AU (C) | 0.035 | 17 | Medium CPP | - | 2 | Unspecified |
| 18 | NF-κB | C | 0.025 | 17 | Low CPP | Nearly unmeasurable uptake | 2 | Unspecified |
| 19 | SV40-T antigen | C | 0.028 | 17 | Low CPP | Nearly unmeasurable uptake | 2 | Unspecified |
| 20 | $HATF_3$ | C | 0.023 | 17 | Low CPP | Nearly unmeasurable uptake | 2 | Unspecified |
| 21 | hCT(9-32) | A | 0.024 | 17 | Low CPP | Nearly unmeasurable uptake | 2 | Unspecified |
| 22 | HIV-1 Rev (34-50) | C | 1.460 | 17 | High CPP | - | 2 | Unspecified |
| | | | | 38 | CPP | > penetratin > Tat 48-60 > VP22 | 2a | - |
| | | | | 56 | CPP | - | Not available | - |
| 23 | Integrin | H | 0.549 | 17 | Medium CPP | - | 2 | Unspecified |
| 24 | DPV6 | C | 0.073 | 17 | Medium CPP | - | 2 | Unspecified |
| 25 | $S4_{13}PV$ | AC | 0.781 | 17 | High CPP | - | 2 | Unspecified |
| 26 | Pep-1 | AC | 0.105 | 17 | Medium CPP | - | 2 | Unspecified |
| 27 | MPG | AC | 1.065 | 17 | Medium CPP | - | 2 | Unspecified |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 28 | Poly-P (SAP) | AC | 0.027 | 17 | Low CPP | Nearly unmeasurable uptake | 2 | Unspecified |
| 29 | R7 | C | 0.395 | 12 | CPP | > R6, < R8-9 | 3 | - |
| | | | | 16 | CPP | > R6, < R8-9 | Not available | - |
| | | | | 17 | High CPP | - | 2 | Unspecified |
| | | | | 36 | CPP | < R7W | 1 and 2 | Unspecified, 2 = dominant mechanism |
| 30 | R9 | C | 1.000 | 17 | High CPP | - | 2 | Unspecified |
| | | | | 31 | CPP | - | Not available | - |
| | | | | 33 | CPP | - | 2 | Unspecified |
| | | | | 35 | High CPP | One of the most efficient known CPPs | 1 and 2 | Unspecified |
| | | | | 41 | High CPP | Rapid | 1e and 2 | Unspecified |
| | | | | 42 | CPP | - | 1e, 2a and 2b | - |
| | | | | 43 | CPP | - | 1 < 2 | Unspecified |
| | | | | 47 | CPP | - | Not available | - |
| | | | | 63 | CPP | - | Not available | - |
| 31 | pVEC scrambled | AU | 0.101 | 7 | Low CPP | << pVEC , not efficient | 2b > 2a | - |
| | | | | 17 | Medium CPP | - | 2 | Unspecified |
| 32 | Tat 47-57 | C | 0.309 | 30 | CPP | << penetratin < transportan 10 | 1 and 2 | Unspecified |
| | | | | 33 | CPP | - | 2 | Unspecified |
| | | | | 42 | CPP | - | 1e, 2a and 2b | - |
| | | | | 58 | CPP | > K-FGF and PreS2-TLM | Not available | - |
| 33 | Tat 48-59 | C | 0.192 | 31 | CPP | < penetratin < R9 | Not available | - |
| | | | | 63 | CPP | - | Not available | - |
| *34* | *M918* | *AC* | *(7.158)* | *32* | *High CPP* | *Excellent novel CPP, > penetratin and transportan 10* | *2a* | - |
| 35 | Penetratin | C | 1.000 | 17 | High CPP | - | 2 | Unspecified |
| | | | | 29 | CPP | - | 2 | Unspecified |
| | | | | 32 | CPP | - | 2a and 2b | - |
| | | | | 33 | CPP | - | 2 | Unspecified |
| | | | | 39 | CPP | - | 2c | - |
| | | | | 42 | CPP | - | 1e, 2a and 2b | - |
| | | | | 44 | CPP | - | 1 and 2 | Unspecified |
| | | | | 60 | CPP | - | 2a | - |
| | | | | 64 | CPP | - | 2b | - |
| 36 | R11 | C | 0.211 | 34 | CPP | > penetratin > Tat 48-60, transportan 10 | Not available | - |
| 37 | RL9 | AC | 0.134 | 35 | Low CPP | Poor | 1 and 2 | Unspecified |
| 38 | RW9 | AC | 1.301 | 35 | High CPP | One of the most efficient known CPPs | 1 and 2 | Unspecified |
| 39 | R7W | C | 1.687 | 36 | CPP | Efficient | 1 and 2 | Unspecified, 2 = dominant |
| 40 | VP22 | AU (C) | 0.161 | 38 | CPP | < Tat 48-60 < penetratin < HIV Rev (34-50) | 2a | - |
| 41 | D-Syn B1 | AC | 0.089 | 39 | CPP | - | 2c | - |
| 42 | Syn B3 | AU (C) | 0.126 | 39 | CPP | - | 2c | - |
| 43 | D-Syn B3 | AU (C) | 0.185 | 39 | CPP | - | 2c | - |
| 44 | Syn B5 | AU (AC) | 1.159 | 39 | CPP | - | 2c | - |
| 45 | ARF (1-22) | AC | 1.641 | 40 | High CPP | ≈ transportan 10 | 2b | - |
| 46 | ARF (1-22) scrambled | AU | 1.296 | 40 | High CPP | ≈ transportan 10 | 2b | - |
| 47 | ARF (2-14) | AC | 0.950 | 40 | High CPP | ≈ transportan 10 | Not available | - |
| 48 | ARF (2-14) scrambled | AU | 0.173 | 40 | Low CPP | - | Not available | - |
| 49 | ARF (19-31) | AC | 1.382 | 40 | High CPP | ≈ transportan 10 | Not available | - |
| 50 | ARF (19-31) scrambled | AU | 0.259 | 40 | Low CPP | - | Not available | - |
| 51 | hLF | AC | 0.952 | 41 | High CPP | Rapid | 1e and 2 | 2 unspecified |
| 52 | MAP (II) | AC | 0.181 | 13 | CPP | - | 1 and 2 | Unspecified |
| 53 | MAP (III) | AC | 0.115 | 13 | CPP | ≈ MAP | 1 and 2 | Unspecified |
| 54 | MAP (VII) | AC | 0.022 | 13 | Low CPP | Slow | 1 and 2 | Unspecified |
| 55 | MAP (VIII) | A | 0.243 | 13 | CPP | > MAP | 1 and 2 | Unspecified |
| 56 | MAP (XI) | AC | 0.177 | 13 | CPP | ≈ MAP | 1 and 2 | Unspecified |
| 57 | MAP (XIII) | A | 0.052 | 13 | CPP | ≈ MAP | 1 and 2 | Unspecified |
| 58 | MAP (XV) | AC | 0.104 | 13 | CPP | ≈ MAP | 1 and 2 | Unspecified |
| 59 | KLA 1 | AC | 0.085 | 13 | CPP | - | 1 and 2 | Unspecified |
| 60 | KLA 2 | AC | 0.008 | 13 | Low CPP | Slow | 1 and 2 | Unspecified |
| 61 | KLA 11 | AC | 0.025 | 13 | Low CPP | Slow | 1 and 2 | Unspecified |
| 62 | KLA 5 | AC | 0.036 | 13 | Low CPP | Slow | 1 and 2 | Unspecified |
| 63 | KLA 12 | AC | 0.079 | 13 | CPP | - | 1 and 2 | Unspecified |
| 64 | KLA 13 | AC | 0.008 | 13 | Low CPP | Slow | 1 and 2 | Unspecified |
| 65 | KLA 14 | AC | 0.015 | 13 | Low CPP | Slow | 1 and 2 | Unspecified |
| 66 | KLA 9 | AC | 0.023 | 13 | Low CPP | Slow | 1 and 2 | Unspecified |
| 67 | KLA 10 | AC | 0.115 | 13 | CPP | - | 1 and 2 | Unspecified |
| 68 | KLA 15 | AC | 0.120 | 13 | CPP | - | 1 and 2 | Unspecified |
| 69 | KLA 8 | AC | 0.181 | 13 | CPP | - | 1 and 2 | Unspecified |
| 70 | TP10-1 | AC | 1.223 | 11 | CPP | < transportan 10 | 1d | - |
| 71 | TP10-2 | AC | 0.749 | 11 | CPP | < transportan 10 | 1d | - |
| 72 | TP10-3 | AC | 1.243 | 11 | CPP | < transportan 10 | 1d | - |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 73 | TP10-4 | AC | 1.263 | 11 | CPP | < transportan 10 | 1d | - |
| 74 | TP10-5 | AC | 2.141 | 11 | CPP | > transportan 10 | 1d | - |
| 75 | D-R9 | C | 1.389 | 12 | CPP | Effective, (> (D-)R6-8) | 3 | - |
| | | | | 43 | CPP | < R9 | 1 > 2 | Unspecified |
| 76 | MP | AC | 0.570 | 45 | Low CPP | Low efficient | 1 | Unspecified |
| *77* | *iMP* | *AC* | *(3.602)* | *45* | *High CPP* | *Highly efficient, (> MitP, penetratin* | *1* | *Unspecified* |
| 78 | rMP | AC | 0.352 | 45 | Low CPP | Low efficient | Not applicable | - |
| 79 | riMP | AC | 0.288 | 45 | Low CPP | Low efficient | Not applicable | - |
| 80 | MitP | AC | 2.712 | 45 | Medium CPP | Efficient | 1 | Unspecified |
| | | | | 46 | CPP | - | Not available | - |
| 81 | iMitP | AC | 2.272 | 45 | CPP | Strong propensity for cell penetration | Not available | - |
| 82 | rMitP | AC | 0.531 | 45 | Low CPP | Low efficient | Not available | - |
| 83 | riMitP | AC | 0.837 | 45 | Low CPP | Low efficient | Not available | - |
| 84 | Cyt $c^{77-101}$ | AU (C) | 0.179 | 46 | High CPP | Extremely/very efficient | Not available | - |
| 85 | Cyt $c^{86-101}$ | AU (C) | 0.006 | 46 | CPP | - | Not available | - |
| 86 | Cyt $c^{79-92}$ | AU (C) | 0.013 | 46 | Not available | - | Not available | - |
| 87 | Cyt $c^{79-88}$ | AU (C) | 0.006 | 46 | Not available | - | Not available | - |
| 88 | Cyt $c^{4-13}$ | AU (C) | 0.013 | 46 | Not available | - | Not available | - |
| 89 | Cyt $c^{5-13}$ | AU (C) | 0.069 | 46 | Not available | - | Not available | - |
| 90 | MTS | H | 0.315 | 48 | CPP | - | Not available | - |
| *91* | *P14LRR* | *AC* | *(7.958)* | *49* | *High CPP* | *Highly efficient class of CPPs* | *1* | *Unspecified* |
| 92 | P11LRR | AC | 1.623 | 49 | High CPP | Highly efficient class of CPPs | 1 and 2 | Unspecified |
| | | | | 50 | CPP | - | 1 and 2 | Unspecified |
| *93* | *(P10LRR-Gly)$_2$-C5* | *AC* | *(84.034)* | *50* | *CPP* | *Uptake far superior to P11LRR and Tat 47-57* | *1 and 2* | *Unspecified* |
| *94* | *(P10LRR-β-Ala)$_2$-C5* | *AC* | *(66.648)* | *50* | *CPP* | *Uptake far superior to P11LRR and Tat 47-57* | *1 and 2* | *Unspecified* |
| *95* | *(P10LRR-ABUA)$_2$-C5* | *AC* | *(73.892)* | *50* | *CPP* | *Uptake far superior to P11LRR and Tat 47-57* | *1 and 2* | *Unspecified* |
| 96 | VPTLK | CH | 0.002 | 51 | CPP | - | Unknown | - |
| *97* | *MAP(Aib)* | *AC* | *(125.240)* | *52* | *High CPP* | - | *Not available* | - |
| 98 | sC18 | AC | 0.166 | 54 | High CPP | Highly efficient | 1 and 2 | Unspecified |
| 99 | hCT(18-32)-k7 | AU | 0.183 | 54 | CPP | - | 2 | Unspecified |
| | | | | 57 | Medium CPP | Effective | Not available | - |
| 100 | N-E5L-hCT(18-32)-k7 | AU | 0.364 | 54 | CPP | Faster and efficienter than hCT(18-32)-k7 | Unclear | - |
| 101 | N-E5L-sC18 | AC | 0.150 | 54 | CPP | Faster and efficienter than sC18 | Unclear | - |
| 102 | N-E5L-Tat 48-60 | AU (C) | 0.507 | 54 | CPP | Faster and efficienter than Tat 48-60 | Unclear | - |
| *103* | *FHV coat (35-49)* | *C* | *(4.127)* | *56* | *High CPP* | *High efficient CPP and superior cellular uptake >Tat 48-60* | *2a* | - |
| *104* | *PasTat* | *C* | *(4.426)* | *55* | *CPP* | - | *Not available* | - |
| 105 | BMV Gag (7-25) | C | 0.288 | 56 | CPP | - | Not available | - |
| 106 | HTLV-II Rex (4-16) | C | 0.288 | 56 | CPP | - | Not available | - |
| 107 | Human cJun (252-279) | C | 2.744 | 56 | CPP | - | Not available | - |
| 108 | Human cFos (139-164) | C | 0.199 | 56 | CPP | - | Not available | - |
| 109 | K-FGF (Kaposi fibroblast growth factor) | H | 0.200 | 58 | CPP | < arginine-rich peptides: Tat 47-57, penetratin and PTD4 | Not available | - |
| 110 | PreS2-TLM (PreS2-derived translocatory motif) | A | 0.224 | 58 | CPP | < arginine-rich peptides: Tat 47-57, penetratin and PTD4 | Not available | - |
| 111 | PTD4 (Protein transduction domain 4) | C | 0.658 | 58 | CPP | > peptides: K-FGF and PreS2-TLM | Not available | - |
| 112 | α-peptide/β-peptoid chimera 2 | AU | 0.185 | 59 | Medium CPP | Possesses efficient cellular uptake properties superior to well-described CPPs, ≈ Tat 47-57 | 1 and 2 | Unspecified |
| 113 | α-peptide/β-peptoid chimera 6 | AU | 2.040 | 59 | High CPP | Possesses efficient cellular uptake properties superior to well-described CPPs, > Tat 47-57 | 1 and 2 | Unspecified |
| 114 | α-peptide/β-peptoid chimera 8 | AU | 2.102 | 59 | High CPP | Possesses efficient cellular uptake properties superior to well-described CPPs , > Tat 47-57 | 1 and 2 | Unspecified |
| 115 | $hArg_8$ ($Homoarginine_8$) | C | 0.464 | 59 | Medium CPP | Possesses efficient cellular uptake properties superior to well-described CPPs, ≈ | 1 and 2 | Unspecified |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Tat 47-57 | | |
| 116 | PenArg | C | 1.810 | 60 | CPP | > penetratin > PenLys | 2a | - |
| 117 | PenLys | C | 0.041 | 60 | CPP | < penetratin < PenArg | 2a | - |
| 118 | aca-[Lys($Nys^+$)-aca]$_4$-Lys($Nys^+$) | AU | 0.001 | 61 | No CPP | - | Not applicable | - |
| 119 | aca-[Lys($Nys^+$)-aca]$_6$-Lys($Nys^+$) | AU | 0.005 | 61 | Low CPP | - | Not available | - |
| 120 | M511 | AU (AC) | 0.599 | 62 | CPP | - | Not available | - |
| 121 | M551 | AU (C) | 0.240 | 62 | CPP | - | Not available | - |
| 122 | G53-1 | AU (AC) | 0.150 | 62 | Low CPP | - | Not available | - |
| 123 | G53-2 | AU (AC) | 0.839 | 62 | CPP | - | Not available | - |
| *124* | *Kno ref. 61 (Knotted-1 homeodomain third helix)* | *C* | *(7.358)* | *63* | *CPP* | - | *Not available* | - |
| 125 | R6/W3 | AC | 0.910 | 63 | CPP | - | Not available | - |
| 126 | $Phe^{6.14}$-penetratin | AU (C) | 0.727 | 64 | CPP | < penetratin | 2b | - |
| 127 | Dodeca-penetratin | AU (AC) | 1.154 | 64 | CPP | ≈ penetratin | 2b | - |
| 128 | MG2d (Magainin 2 analogue) | AC | 0.798 | 65 | CPP | - | 1b | - |
| 129 | BF2d (Buforin 2 analogue) | AC | 0.953 | 65 | CPP | - | Not available | - |
| 130 | YTA2 | AC | 1.545 | 66 | CPP | = pVEC, > Tat 48-60, transportan 10, penetratin | 1 and 2 | Unspecified |
| 131 | K9 | C | 0.119 | 12 | Low CPP | Not effective | Not available | - |
| 132 | H9 | C | 0.068 | 12 | Low CPP | Not effective | Not available | - |
| 133 | O9 | C | 0.068 | 12 | Low CPP | Not effective | Not available | - |
| 134 | R8 | C | 0.639 | 12 | Medium CPP | Effective CPP (> R6-7, < R9) | 3 | - |
| | | | | 16 | CPP | >R6-7, < R9 | Not available | - |
| 135 | R6 | C | 0.194 | 12 | Medium CPP | Effective CPP, < R7-9 | 3 | - |
| | | | | 16 | CPP | < R7-9 | Not available | - |
| 136 | R5 | C | 0.077 | 12 | Low CPP | Not effective CPP | Not available | - |
| | | | | 16 | No CPP | - | Not applicable | - |
| 137 | R4 | C | 0.074 | 12 | Low CPP | Not effective CPP | Not available | - |
| 138 | R3 | C | 0.055 | 12 | Low CPP | Not effective CPP | Not available | - |
| 139 | D-R8 | C | 1.577 | 12 | Medium CPP | Effective CPP, > (D-)R6-7, < (D-) R9 | 3 | - |
| 140 | D-R7 | C | 1.071 | 12 | Medium CPP | Effective CPP, > (D-)R6, < (D-) R8-9 | 3 | - |
| 141 | D-R6 | C | 0.323 | 12 | Medium CPP | Effective CPP, < (D-)R7-9 | 3 | - |
| 142 | D-R5 | C | 0.115 | 12 | Low CPP | Not effective CPP | Not available | - |
| 143 | D-R4 | C | 0.098 | 12 | Low CPP | Not effective CPP | Not available | - |
| 144 | R15 | C | 1.345 | 12 | Medium CPP | Effective CPP, > R6-9, but toxic | 3 | - |
| 145 | R20 | C | 0.764 | 12 | Medium CPP | Effective CPP, < R9, R15, but toxic | 3 | - |
| 146 | R25 | C | 0.400 | 12 | Low CPP | Not effective CPP, < R7, R9, R15, but toxic | Not available | - |
| 147 | R30 | C | 0.109 | 12 | Low CPP | Not effective CPP | Not available | - |
| 148 | [$Ala_1$]pVEC | AC | 0.304 | 7 | CPP | Significant < pVEC | 2b > 2a | - |
| 149 | [$Ala_2$]pVEC | AC | 0.507 | 7 | CPP | Significant < pVEC | 2b > 2a | - |
| 150 | [$Ala_3$]pVEC | AC | 0.406 | 7 | CPP | Significant < pVEC | 2b > 2a | - |
| 151 | [$Ala_4$]pVEC | AC | 0.659 | 7 | CPP | Significant < pVEC | 2b > 2a | - |
| 152 | [$Ala_5$]pVEC | AC | 0.456 | 7 | CPP | Significant < pVEC | 2b > 2a | - |
| 153 | [$Ala_6$]pVEC | AC | 2.433 | 7 | CPP | Significant > pVEC | 2b > 2a | - |
| 154 | [$Ala_7$]pVEC | AC | 1.115 | 7 | CPP | ≈ pVEC | 2b > 2a | - |
| 155 | [$Ala_8$]pVEC | AC | 2.129 | 7 | CPP | Significant > pVEC | 2b > 2a | - |
| 156 | [$Ala_9$]pVEC | AC | 0.760 | 7 | CPP | Significant > pVEC | 2b > 2a | - |
| 157 | [$Ala_{10}$]pVEC | AC | 1.470 | 7 | CPP | ≈ pVEC | 2b > 2a | - |
| 158 | [$Ala_{11}$]pVEC | AC | 1.774 | 7 | CPP | ≈ pVEC | 2b > 2a | - |
| 159 | [$Ala_{12}$]pVEC | AC | 1.420 | 7 | CPP | ≈ pVEC | 2b > 2a | - |
| 160 | [D-$Ala_{13}$]pVEC | AC | 1.825 | 7 | CPP | ≈ pVEC | 2b > 2a | - |
| 161 | [$Ala_{14}$]pVEC | AC | 0.558 | 7 | CPP | Significant > pVEC | 2b > 2a | - |
| 162 | [D-$Ala_{15}$]pVEC | AC | 1.115 | 7 | CPP | ≈ pVEC | 2b > 2a | - |
| 163 | [$Ala_{16}$]pVEC | AC | 1.521 | 7 | CPP | ≈ pVEC | 2b > 2a | - |
| 164 | [$Ala_{17}$]pVEC | AC | 2.129 | 7 | CPP | Significant > pVEC | 2b > 2a | - |
| 165 | [$Ala_{18}$]pVEC | AC | 2.079 | 7 | CPP | ≈ pVEC | 2b > 2a | - |
| 166 | retro-pVEC | AC | 0.406 | 7 | CPP | Significant > pVEC | 2b > 2a | - |
| 167 | Ap1 | C | 0.289 | 9 | Low CPP | < penetratin | Unclear | - |
| 168 | Ap2 | C | 1.333 | 9 | CPP | > penetratin | Unclear | - |
| 169 | Ap3 | C | 0.111 | 9 | Low CPP | < penetratin | Unclear | - |
| 170 | Ap4 | C | 0.511 | 9 | Low CPP | < penetratin | Unclear | - |
| 171 | Ap5 | C | 0.244 | 9 | Low CPP | < penetratin | Unclear | - |
| 172 | Ap6 | C | 0.222 | 9 | Low CPP | < penetratin | Unclear | - |
| 173 | Ap7 | C | 0.089 | 9 | Low CPP | < penetratin | Unclear | - |
| 174 | Ap8 | C | 0.778 | 9 | CPP | ≈ penetratin | Unclear | - |
| 175 | Ap9 | C | 0.978 | 9 | CPP | ≈ penetratin | Unclear | - |
| 176 | Ap10 | AC | 0.400 | 9 | Low CPP | < penetratin | Unclear | - |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 177 | Ap11 | C | 0.242 | 9 | Low CPP | < penetratin | Unclear | - |
| 178 | Ap12 | C | 0.644 | 9 | CPP | < penetratin | Unclear | - |
| 179 | Ap13 | C | 0.378 | 9 | Low CPP | < penetratin | Unclear | - |
| 180 | Ap14 | C | 0.356 | 9 | Low CPP | < penetratin | Unclear | - |
| 181 | Ap15 | C | 0.411 | 9 | Low CPP | < penetratin | Unclear | - |
| 182 | Ap16 | C | 0.444 | 9 | Low CPP | < penetratin | Unclear | - |
| 183 | SAP (E) | A | 0.007 | 67 | Low CPP | Not highly efficient | 2b | - |
| 184 | Eng (Engrailed-2 homeodomain third helix) | C | 1.235 | 69 | CPP | - | Not available | - |
| 185 | Hox (HoxA-13 homeodomain third helix) | C | 0.500 | 69 | CPP | - | Not available | - |
| *186* | *Kno ref. 67 (Knotted-1 homeodomain third helix)* | *C* | *(11.118)* | *69* | *High CPP* | *High uptake efficiency* | *Not available* | - |

*Peptides whose unified response is an outlier are indicated in italic. Their unreliable CP-responses were not considered during data-evaluation.*

[1]Chemical classes of CPPs: A = amphipathic, C = cationic, H = hydrophobic, AC = intersection amphipathic-cationic, CH = intersection cationic-hydrophobic and AU = author unclassified. If AU, the recommended chemical class, according to ref. 6, is indicated between brackets.

[2]Literature evaluation = how the authors of the study estimated the cellular influx capacity of the investigated peptides: no, low, medium or high CPP. CPP alone means not specified by the authors.

[3]1 = direct penetration with 1a = inverted micelles, 1b = pore formation, 1c = carpet like model, 1d = membrane thinning and 1e = uptake through nucleation zones; 2 = endocytosis with 2a = micropinocytosis, 2b = endocytosis dependent on coat proteins (clathrin, caveolae or lipid raft mediated) and 2c = endocytosis independent on coat proteins; 3 = energy-dependent mechanism, but not endocytosis [according to ref. 2,12,72,73]