

Human opioid receptor kappa (OPRK) 3xHA-tagged (N-terminus) in pcDNA3.1

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                >AflIII      >Asp7181
                |           |
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>NheI          >PmeI      >HindIII      >KpnI
|             |           |           |
|             |           |           |
|             |           |           |
GCT AGC GTT TAA ACT TAA GCT TGG TAC CAC C ATG TAC CCA TAC GAT GTT
                M   Y   P   Y   D   V>
                a   a 3XHA a   a   >

50              60              70              80              90
CCA GAT TAC GCT TAC CCA TAC GAT GTT CCA GAT TAC GCT TAC CCA TAC
P   D   Y   A   Y   P   Y   D   V   P   D   Y   A   Y   P   Y>
a   a   a   a   a   a   a   a 3XHA a   a   a   a   a   a   a   >

100             110             120             130             140
GAT GTT CCA GAT TAC GCT GAT GAA TCC CCG ATT CAG ATC TTC CGC GGG
D   V   P   D   Y   A   D>
a   a   3XHA a   a   >

                E   S   P   I   Q   I   F   R   G>
                HUMAN OPIOID RECEPTOR KAPPA   >

150             160             170             180             190
GAG CCG GGC CCT ACC TGC GCC CCG AGC GCC TGC CTG CCC CCC AAC AGC
E   P   G   P   T   C   A   P   S   A   C   L   P   P   N   S>
b   b   b_HUMAN OPIOID RECEPTOR KAPPA (OPRK) b   b   b   >

200             210             220             230             240
AGC GCC TGG TTT CCC GGC TGG GCC GAG CCC GAC AGC AAC GGC AGC GCC
S   A   W   F   P   G   W   A   E   P   D   S   N   G   S   A>
b   b   b_HUMAN OPIOID RECEPTOR KAPPA (OPRK) b   b   b   >

250             260             270             280
GGC TCG GAG GAC GCG CAG CTG GAG CCC GCG CAC ATC TCC CCG GCC ATC
G   S   E   D   A   Q   L   E   P   A   H   I   S   P   A   I>
b   b   b_HUMAN OPIOID RECEPTOR KAPPA (OPRK) b   b   b   >

290             300             310             320             330
CCG GTC ATC ATC ACG GCG GTC TAC TCC GTA GTG TTC GTC GTG GGC TTG
P   V   I   I   T   A   V   Y   S   V   V   F   V   V   G   L>
b   b   b_HUMAN OPIOID RECEPTOR KAPPA (OPRK) b   b   b   >

340             350             360             370             380
GTG GGC AAC TCG CTG GTC ATG TTC GTG ATC ATC CGA TAC ACA AAG ATG
V   G   N   S   L   V   M   F   V   I   I   R   Y   T   K   M>
b   b   b_HUMAN OPIOID RECEPTOR KAPPA (OPRK) b   b   b   >

390             400             410             420             430
AAG ACA GCA ACC AAC ATT TAC ATA TTT AAC CTG GCT TTG GCA GAT GCT
K   T   A   T   N   I   Y   I   F   N   L   A   L   A   D   A>
b   b   b_HUMAN OPIOID RECEPTOR KAPPA (OPRK) b   b   b   >

440             450             460             470             480
TTA GTT ACT ACA ACC ATG CCC TTT CAG AGT ACG GTC TAC TTG ATG AAT
L   V   T   T   T   M   P   F   Q   S   T   V   Y   L   M   N>
b   b   b_HUMAN OPIOID RECEPTOR KAPPA (OPRK) b   b   b   >

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          490          500          510          520
TCC TGG CCT TTT GGG GAT GTG CTG TGC AAG ATA GTA ATT TCC ATT GAT
S   W   P   F   G   D   V   L   C   K   I   V   I   S   I   D>
__b__b__b_HUMAN OPIOID RECEPTOR KAPPA  (OPRK)__b__b__b__>

530          540          550          560          570
TAC TAC AAC ATG TTC ACC AGC ATC TTC ACC TTG ACC ATG ATG AGC GTG
Y   Y   N   M   F   T   S   I   F   T   L   T   M   M   S   V>
__b__b__b_HUMAN OPIOID RECEPTOR KAPPA  (OPRK)__b__b__b__>

580          590          600          610          620
GAC CGC TAC ATT GCC GTG TGC CAC CCC GTG AAG GCT TTG GAC TTC CGC
D   R   Y   I   A   V   C   H   P   V   K   A   L   D   F   R>
__b__b__b_HUMAN OPIOID RECEPTOR KAPPA  (OPRK)__b__b__b__>

          630          640          650          660          670
ACA CCC TTG AAG GCA AAG ATC ATC AAT ATC TGC ATC TGG CTG CTG TCG
T   P   L   K   A   K   I   I   N   I   C   I   W   L   L   S>
__b__b__b_HUMAN OPIOID RECEPTOR KAPPA  (OPRK)__b__b__b__>

          680          690          700          710          720
TCA TCT GTT GGC ATC TCT GCA ATA GTC CTT GGA GGC ACC AAA GTC AGG
S   S   V   G   I   S   A   I   V   L   G   G   T   K   V   R>
__b__b__b_HUMAN OPIOID RECEPTOR KAPPA  (OPRK)__b__b__b__>

          730          740          750          760
GAA GAC GTC GAT GTC ATT GAG TGC TCC TTG CAG TTC CCA GAT GAT GAC
E   D   V   D   V   I   E   C   S   L   Q   F   P   D   D   D>
__b__b__b_HUMAN OPIOID RECEPTOR KAPPA  (OPRK)__b__b__b__>

770          780          790          800          810
TAC TCC TGG TGG GAC CTC TTC ATG AAG ATC TGC GTC TTC ATC TTT GCC
Y   S   W   W   D   L   F   M   K   I   C   V   F   I   F   A>
__b__b__b_HUMAN OPIOID RECEPTOR KAPPA  (OPRK)__b__b__b__>

820          830          840          850          860
TTC GTG ATC CCT GTC CTC ATC ATC ATC GTC TGC TAC ACC CTG ATG ATC
F   V   I   P   V   L   I   I   I   V   C   Y   T   L   M   I>
__b__b__b_HUMAN OPIOID RECEPTOR KAPPA  (OPRK)__b__b__b__>

          870          880          890          900          910
CTG CGT CTC AAG AGC GTC CGG CTC CTT TCT GGC TCC CGA GAG AAA GAT
L   R   L   K   S   V   R   L   L   S   G   S   R   E   K   D>
__b__b__b_HUMAN OPIOID RECEPTOR KAPPA  (OPRK)__b__b__b__>

          920          930          940          950          960
CGC AAC CTG CGT AGG ATC ACC AGA CTG GTC CTG GTG GTG GTG GCA GTC
R   N   L   R   R   I   T   R   L   V   L   V   V   V   A   V>
__b__b__b_HUMAN OPIOID RECEPTOR KAPPA  (OPRK)__b__b__b__>

          970          980          990          1000
TTC GTC GTC TGC TGG ACT CCC ATT CAC ATA TTC ATC CTG GTG GAG GCT
F   V   V   C   W   T   P   I   H   I   F   I   L   V   E   A>
__b__b__b_HUMAN OPIOID RECEPTOR KAPPA  (OPRK)__b__b__b__>

1010          1020          1030          1040          1050

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CTG GGG AGC ACC TCC CAC AGC ACA GCT GCT CTC TCC AGC TAT TAC TTC
L G S T S H S T A A L S S Y Y F>
___b___b___b_HUMAN OPIOID RECEPTOR KAPPA (OPRK)___b___b___b___>

1060 1070 1080 1090 1100
TGC ATC GCC TTA GGC TAT ACC AAC AGT AGC CTG AAT CCC ATT CTC TAC
C I A L G Y T N S S L N P I L Y>
___b___b___b_HUMAN OPIOID RECEPTOR KAPPA (OPRK)___b___b___b___>

1110 1120 1130 1140 1150
GCC TTT CTT GAT GAA AAC TTC AAG CGG TGT TTC CGG GAC TTC TGC TTT
A F L D E N F K R C F R D F C F>
___b___b___b_HUMAN OPIOID RECEPTOR KAPPA (OPRK)___b___b___b___>

1160 1170 1180 1190 1200
CCA CTG AAG ATG AGG ATG GAG CGG CAG AGC ACT AGC AGA GTC CGA AAT
P L K M R M E R Q S T S R V R N>
___b___b___b_HUMAN OPIOID RECEPTOR KAPPA (OPRK)___b___b___b___>

1210 1220 1230 1240
ACA GTT CAG GAT CCT GCT TAC CTG AGG GAC ATC GAT GGG ATG AAT AAA
T V Q D P A Y L R D I D G M N K>
___b___b___b_HUMAN OPIOID RECEPTOR KAPPA (OPRK)___b___b___b___>

>XhoI >XbaI >ApaI >PmeI
| | | |
1250 1260 1270 1280
CCA GTA TGA CT CGA GTC TAG AGG GCC CGT TTA AAC
P V *>
___b___b___b___>