

## **pHTS-NFAT Molecule Information**

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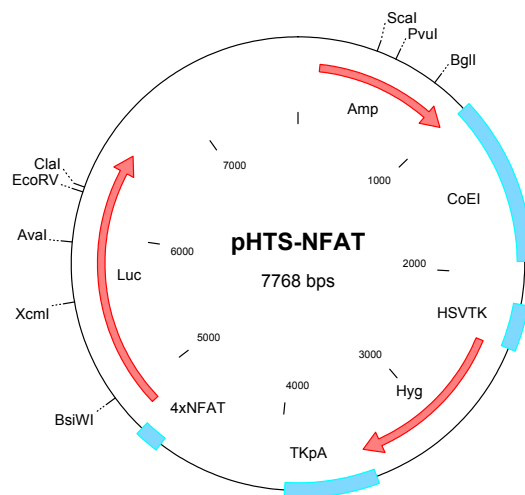
[Nucleotide Sequence](#)

[Restriction Enzyme List](#)

### **Molecule Features:**

Features	Start	End
Ampicillin Resistance Gene	137	997
ColEI Replication Origin	1012	1930
HSV-TK Promoter	2167	2416
Hygromycin Resistance Gene	2430	3467
TK Polyadenylation Signal	3445	3957
Luciferase Gene	4888	6540
4 x NFAT Enhancer Element	4688	4821

### **Vector Map**



**Nucleotide Sequence of pHTS-NFAT**

1 GACGTCAGGT GGCAC TTTTC GGGGAAATGT GCGCGGAACC CCTATTTGTT TATTTTTCTA  
61 AATACATTCA AATATGTATC CGCTCATGAG ACAATAACCC TGATAAATGC TTCAATAATA  
121 TTGAAAAAGG AAGAGTATGA GTATTCAACA TTTCCGTGTC GCCCTTATTC CCTTTTTTGC  
181 GGCATTTTGC CTTCTGTTT TTGCTCACCC AGAAACGCTG GTGAAAGTAA AAGATGCTGA  
241 AGATCAGTTG GGTGCACGAG TGGGTTACAT CGAACTGGAT CTCAACAGCG GTAAGATCCT  
301 TGAGAGTTTT CGCCCCGAAG AACGTTTTCC AATGATGAGC ACTTTTAAAG TTCTGCTATG  
361 TGGCGCGGTA TTATCCCGTA TTGACGCCGG GCAAGAGCAA CTCGGTGCCT GCATACACTA  
421 TTCTCAGAAT GACTTGGTTG AGTACTCACC AGTCACAGAA AAGCATCTTA CGGATGGCAT  
481 GACAGTAAGA GAATTATGCA GTGCTGCCAT AACCATGAGT GATAACACTG CGGCCAACTT  
541 ACTTCTGACA ACGATCGGAG GACCGAAGGA GCTAACCGCT TTTTTCACA ACATGGGGGA  
601 TCATGTAAC CGCCTTGATC GTTGGGAACC GGAGCTGAAT GAAGCCATAC CAAACGACGA  
661 GCGTGACACC ACGATGCCTG TAGCAATGGC AACAACTTG CGCAAATAT TAACTGGCGA  
721 ACTACTTACT CTAGCTTCCC GGCAACAATT AATAGACTGG ATGGAGGCGG ATAAAGTTGC  
781 AGGACCATT CTGCGCTCGG CCCTCCCGC TGGCTGGTTT ATTGCTGATA AATCTGGAGC  
841 CCGTGAGCGT GGGTCTCGCG GTATCATTGC AGCACTGGGG CCAGATGGTA AGCCCTCCCG  
901 TATCGTAGTT ATCTACACGA CGGGGAGTCA GGCAACTATG GATGAACGAA ATAGACAGAT  
961 CGCTGAGATA GGTGCCTCAC TGATTAAGCA TTGGTAACTG TCAGACCAAG TTTACTCATA  
1021 TATACTTTAG ATTGATTTAA AACTTCATTT TTAATTTAAA AGGATCTAGG TGAAGATCCT  
1081 TTTTGATAAT CTCATGACCA AAATCCCTTA ACGTGAGTTT TCGTTCCTACT GAGCGTCAGA  
1141 CCCCCTAGAA AAGATCAAAG GATCTTCTTG AGATCCTTTT TTTCTGCGCG TAATCTGCTG  
1201 CTTGCAAACA AAAAAACCAC CGCTACCAGC GGTGGTTTGT TTGCCGGATC AAGAGCTACC  
1261 AACTCTTTTT CCGAAGGTAA CTGGCTTCAG CAGAGCGCAG ATACCAAATA CTGTCTTCT  
1321 AGTGTAGCCG TAGTTAGGCC ACCACTTCAA GAACTCTGTA GCACCGCCTA CATACTCGC  
1381 TCTGCTAATC CTGTTACCAG TGGCTGCTGC CAGTGGCGAT AAGTCGTGTC TTACCGGGTT  
1441 GGACTCAAGA CGATAGTTAC CGGATAAGGC GCAGCGGTCG GGCTGAACGG GGGGTTCTGTG  
1501 CACACAGCCC AGCTTGGAGC GAACGACCTA CACCGAACTG AGATACCTAC AGCGTGAGCA  
1561 TTGAGAAAGC GCCACGCTTC CCGAAGGGAG AAAGGCGGAC AGGTATCCGG TAAGCGGCAG  
1621 GGTCGGAACA GGAGAGCGCA CGAGGGAGCT TCCAGGGGGA AACGCCTGGT ATCTTTATAG  
1681 TCCTGTGCGG TTTCCGCCACC TCTGACTTGA GCGTCGATTT TTGTGATGCT CGTCAGGGGG  
1741 GCGGAGCTAT GGAAAAACGC CAGCAACGCG CCTTTTTACG GTTCTGGCC TTTTGCTGGC  
1801 CTTTTGCTCA CATGTTCTTT CCTGCGTTAT CCCTGATTCT GTGGATAACC GTATTACCGC  
1861 CTTTGAGTGC TGATACCGCT CGCCGACCC GAACGACCGA GCGCAAGTCA GCGACGAGG  
1921 AAGCGGAAGA GCGCCTGATG CCGTATTTTC TCCTTACGCA TCTGTGCGGT ATTTACACACC  
1981 GCATACGAAC GCCAGCAAGA CGTAGCCAG CGCGTCGGCC CCGAGATGCG CCGCGTGCAG  
2041 CTGCTGGAGA TGGCGGACGC GATGGATATG TTCTGCCAAG GGTTGGTTTG CGCATTACA  
2101 GTTCTCCGCA AGAATTGATT GGCTCCAATT CTTGGAGTGG TGAATCCGTT AGCGAGGTGC  
2161 CGCCGGGCTG CTTTATCCCC GTGGCCCGTT GCTCGCGTTT GCTGGCGGTG TCCCCGGAAG  
2221 AAATATATTT GCATGTCTTT AGTTCTATGA TGACACAAAC CCCGCCAGC GTCTTGTCTAT  
2281 TGGCGAATTC GAACACGCAG ATGCAGTCGG GCGGCGCGG TCCCAGGTCC ACTTCGCATA  
2341 TTAAGGTGAC GCGTGTGGCC TCGAACACCG AGCGACCCTG CAGCGACCCG CTTAACAGCG  
2401 TCAACAGCGT GCCGCAAGAT CAGCTTGATA TGAAAAAGCC TGAACCTACC GCGACGTCTG  
2461 TCGAGAAGTT TCTGATCGAA AAGTTCGACA GCGTCTCCGA CCTGATGCAG CTCTCGGAGG  
2521 GCGAAGAATC TCGTGTCTT AGCTTCGATG TAGGAGGGCG TGGATATGTC CTGCGGGTAA  
2581 ATAGCTGCGC CGATGGTTTC TACAAAGATC GTTATGTTTA TCGGCACTTT GCATCGGCCG  
2641 CGCTCCCGAT TCCGGAAGTG CTTGACATTG GGAATTCAG CGAGAGCCTG ACCTATTGCA  
2701 TCTCCCGCCG TGCACAGGGT GTCACGTTGC AAGACCTGCC TGAAACCGAA CTGCCCGCTG  
2761 TTCTGCAGCC GGTGCGGGAG GCCATGGATG CGATCGCTGC GGCCGATCTT AGCCAGACGA  
2821 GCGGGTTCGG CCCATTCGGA CCGCAAGGAA TCGGTCAATA CACTACATGG CGTGATTTCA  
2881 TATGCGCGAT TGCTGATCCC CATGTGTATC ACTGGCAAAC TGTGATGGAC GACACCGTCA  
2941 GATGCTCCGT CGCGCAGGCT CTCGATGAGC TGAATGTTG TCCCGAGGAC TGCCCCGAAG  
3001 TCCGGCACCT CGTGCACGCG GATTTGCGCT CCAACAATGT CCTGACGGAC AATGGCCGCA  
3061 TAACAGCGGT CATTGACTGG AGCGAGGCGA TGTTCCGGGA TTCCCAATAC GAGGTGCGCA  
3121 ACATCTTCTT CTGGAGGCCG TGGTTGGCTT GTATGGAGCA GCAGACGCGC TACTTCGAGC  
3181 GGAGGCATCC GGAGCTTGCA GGATCGCCGC GGCTCCGGGC GTATATGCTC CGCATTGGTC

3241 TTGACCAACT CTATCAGAGC TTGGTTGACG GCAATTTTCGA TGATGCAGCT TGGGCGCAGG  
3301 GTCGATGCGA CGCAATCGTC CGATCCGGAG CCGGGACTGT CGGGCGTACA CAAATCGCCC  
3361 GCAGAAGCGC GGCCGTCTGG ACCGATGGCT GTGTAGAAGT ACTCGCCGAT AGTGAAACC  
3421 GACGCCCCAG CACTCGTGGG GATCGGGAGA TGGGGGAGGC TAACTGAAAC ACGGAAGGAG  
3481 ACAATACCGG AAGGAACCCG CGCTATGACG GCAATAAAAA GACAGAATAA AACGCACGGG  
3541 TGTTGGGTCG TTTGTTCATA AACGCGGGGT TCGGTCCCAG GGCTGGCACT CTGTGATAC  
3601 CCCACCGAGA CCCCATGGG GCCAATACGC CCGCGTTTCT TCCTTTTCCC CACCCCAACC  
3661 CCCAAGTTCG GGTGAAGGCC CAGGGCTCGC AGCCAACGTC GGGGCGGCAA GCCCGCCATA  
3721 GCCACGGGCC CCGTGGGTTA GGGACGGGGT CCCCCATGGG GAATGGTTTA TGGTTCGTGG  
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3841 CATGTGTTTT GGATGGCCTG GGCATGGACC CAGTGTACTG GCGCGACACG AACACCGGGC  
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4081 TGGGTCATGG CTGCGCCCCG ACACCCGCCA ACACCCGCTG ACGCGCCCTG ACGGGCTTGT  
4141 CTGCTCCCGG CATCCGCTTA CAGACAAGCT GTGACCGTCT CCGGGAGCTG CATGTGTCAG  
4201 AGGTTTTTAC CGTCATCACC GAAACGCGCG AGGCAGGATC AGCCATATCA CATTTGTAGA  
4261 GGTTTTACTT GCTTTAAAAA ACCTCCCACA CCTCCCCCTG AACCTGAAAC ATAAAATGAA  
4321 TGCAATTGTT GTTAACTTGT TTATTGCAGC TTATAATGGT TACAAATAAA GCAATAGCAT  
4381 CACAAATTC ACAAATAAAG CTTTTTTCAC TGCATTCTAG TTGTGGTTTG TCCAAACTCA  
4441 TCAATGTATC TTATCATGTC TGGATCAGCC ATATCACATT TGTAGAGGTT TACTTGTCTT  
4501 TAAAAACCT CCCACACCTC CCCCTGAACC TGAAACATAA AATGAATGCA ATTGTTGTTA  
4561 ACTTGTTTAT TGCAGCTTAT AATGGTTACA AATAAAGCAA TAGCATCACA AATTTACAAA  
4621 ATAAAGCAAT TTTTCACTGC ATTCTATTGT GGTGTTGTCCA AACTCATCAA TGTATCTTAT  
4681 CATGTCTGGA TCCAAGCTGG AGGAAAAACT GTTTCATACA GAAGGCGTGG AGGAAAAACT  
4741 GTTTCATACA GAAGGCGTGG AGGAAAAACT GTTTCATACA GAAGGCGTGG AGGAAAAACT  
4801 GTTTCATACA GAAGGCGTGG CCGGAGACTCT AGAGGGTATA TAATGGAAGC TCGAATTCCA  
4861 GCTTGGCATT CCGGTACTGT TGGTAAAAATG GAAGACGCCA AAAACATAAA GAAAGGCCCG  
4921 GCGCCATTCT ATCCTCTAGA GGATGGAACC GTGGGAGAGC AACTGCATAA GGCTATGAAG  
4981 AGATACGCC CCTTTCCTGG AACAATTGCT TTTACAGATG CACATATCGA GGTGAACATC  
5041 ACGTACGCGG AATACTTCGA AATGTCCGTT CGGTTGGCAG AAGCTATGAA ACGATATGGG  
5101 CTGAATACAA ATCACAGAAT CGTCGTATGC AGTGAAAACT CTCTTCAATT CTTTATGCCG  
5161 GTGTTGGGCG CGTTATTTAT CGGAGTTGCA GTTGCGCCCG CGAACGACAT TTATAATGAA  
5221 CGTGAATTGC TCAACAGTAT GAACATTTTCG CAGCCTACCG TAGTGTTTGT TTCCAAAAAG  
5281 GGGTTGCAAA AAATTTTGAA CGTGCAAAAA AAATTACCAA TAATCCAGAA AATTATTATC  
5341 ATGGATTCTA AAACGGATTA CCAGGGATTT CAGTCGATGT ACACGTTCTG CACATCTCAT  
5401 CTACCTCCCG GTTTTAATGA ATACGATTTT GTACCAGAGT CCTTTGATCG TGACAAAACA  
5461 ATTGCACTGA TAATGAATTC CTCTGGATCT ACTGGGTTAC CTAAGGGTGT GGCCCTTCCG  
5521 CATAGAACTG CCTGCGTCAG ATTCTCGCAT GCCAGAGATC CTATTTTTGG CAATCAAATC  
5581 ATTCCGATA CTGCGATTTT AAGTGTGTGT CCATTCCATC ACGGTTTTGG AATGTTTACT  
5641 ACACTCGGAT ATTTGATATG TGGATTTTCGA GTCGTCTTAA TGTATAGATT TGAAGAAGAG  
5701 CTGTTTTTAC GATCCCTTCA GGATTACAAA ATTCAAAGTG CGTTGCTAGT ACCAACCCTA  
5761 TTTTCACTCT TCGCCAAAAG CACTCTGATT GACAAATACG ATTTATCTAA TTTACACGAA  
5821 ATTGCTTCTG GGGGCGCACC TCTTTCGAAA GAAGTCGGGG AAGCGGTTGC AAAACGCTTC  
5881 CATCTTCCAG GGATACGACA AGGATATGGG CTCACTGAGA CTACATCAGC TATTCTGATT  
5941 ACACCCGAGG GGGATGATAA ACCGGGCGCG GTCGGTAAAG TTGTTCCATT TTTTGAAGCG  
6001 AAGTTTGTGG ATCTGGATAC CGGGAAAACG CTGGGCGTTA ATCAGAGAGG CGAATTATGT  
6061 GTCAGAGGAC CTATGATTAT GTCCGGTTAT GTAAACAATC CGGAAGCGAC CAACGCCTTG  
6121 ATTGACAAGG ATGGATGGCT ACATTCTGGA GACATAGCTT ACTGGGACGA AGACGAACAC  
6181 TTCTTCATAG TTGACCGCTT GAAGTCTTTA ATTAATAACA AAGGATATCA GGTGGCCCCC  
6241 GCTGAATTGG AATCGATATT GTTACAACAC CCCAACATCT TCGACGCGGG CGTGGCAGGT  
6301 CTTCCCGACG ATGACGCCGG TGAACCTCCC GCCGCCGTTG TTGTTTTGGA GCACGGAAAG  
6361 ACGATGACGG AAAAAGAGAT CGTGGATTAC GTCGCCAGTC AAGTAACAAC CGCGAAAAAG  
6421 TTGCGCGGAG GAGTTGTGTT TGTGGACGAA GTACCGAAAG GTCTTACCGG AAAACTCGAC  
6481 GCAAGAAAAA TCAGAGAGAT CCTCATAAAG GCCAAGAAGG GCGGAAAGTC CAAATTGTAA  
6541 AATGTAAGT TATTCAGCGA TGACGAAATT CTTAGCTATT GTAATACTCT AGAGGATCTT  
6601 TGTGAAGGAA CCTTACTTCT GTGGTGTGAC ATAATTGGAC AAACCTACCTA CAGAGATTTA

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6661 AAGCTCTAAG GTAAATATAA AATTTTTAAG TGTATAATGT GTTAAACTAC TGATTCTAAT  
6721 TGTTTGTGTA TTTTAGATTC CAACCTATGG AACTTATGAA TGGGAGCAGT GGTGGAATGC  
6781 CTTTAATGAG GAAAACCTGT TTTGCTCAGA AGAAATGCCA TCTAGTGATG ATGAGGCTAC  
6841 TGCTGACTCT CAACATTCTA CTCTCAAAAAG AAGAGAAAAGG TAGAGACCCA AGGACTTTCC  
6901 TTCAGAATTG CTAAGTTTTT TGAGTCATGC TGTGTTTAGT AATAGAACTC TTGCTTGCTT  
6961 TGCTATTTAC AACCACAAAG GAAAAAGCTG CACTGCTATA CAAGAAAATT ATGGAAAAAT  
7021 ATTCTGTAAC CTTTATAAGT AGGCATAACA GTTATAATCA TAACATACTG TTTTTTCTTA  
7081 CTCCACACAG GCATAGAGTG TCTGCTATTA ATAACTATGC TCAAAAATTG TGTACCTTTA  
7141 GCTTTTTAAT TTGTAAAGGG GTTAATAAGG AATATTTGAT GTATAGTGCC TTGACTAGAG  
7201 ATCATAATCA GCCATACCAC ATTTGTAGAG GTTTTACTTG CTTTAAAAAA CCTCCCACAC  
7261 CTCCCCCTGA ACCTGAAACA TAAAATGAAT GCAATTGTTG TTGTAACTT GTTTATTGCA  
7321 GCTTATAATG GTTACAAATA AAGCAATAGC ATCACAAATT TCACAAATAA AGCATTTTTT  
7381 TCACTGCATT CTAGTTGTGG TTTGTCCAAA CTCATCAATG TATCTTATCA TGTCTGGATC  
7441 CCCAGGAAGC TCCTCTGTGT CCTCATAAAC CCTAACCTCC TCTACTTGAG AGGACATTCC  
7501 AATCATAGGC TGCCCATCCA CCCTCTGTGT CCTCCTGTTA ATTAGGTCAC TTAACAAAAA  
7561 GGAAATTGGG TAGGGGTTTT TCACAGACCG CTTTCTAAGG GGTAATTTTA AAATATCTGG  
7621 GAAGTCCCTT CCACTGCTGT GTTCCAGAAG TGTTGGTAAA CAGCCCACAA ATGTCAACAG  
7681 CAGAAACATA CAAGCTGTCA CTTTGACAAA AGGGCCTCGT GATACGCCTA TTTTTATAGG  
7741 TTAATGTCAT GATAATAATG GTTTCTTA

## Restriction Map of pHTS-NFAT

This list contains restriction enzymes cut four times or fewer.

Enzyme	#sites	Bp position of recognition site			
AatII	2	1,	2453		
AccI	1	4054			
AflIII	3	1810,	2349,	5381	
AhdI	1	919			
AlwNI	1	1398			
ApaI	1	3726			
AvaI	2	2020,	5944		
BamHI	2	4688,	7436		
BanII	3	3683,	3726,	5908	
BbeI	2	3953,	4920		
BbsI	3	4891,	6169,	6299	
BglI	1	800			
BmrI	4	874,	4079,	5491,	6161
BsaAI	2	4073,	5040		
BsaBI	1	7200			
BsaI	3	852,	3607,	6883	
BseRI	3	6428,	7450,	7477	
BsgI	1	6988			
BsiWI	1	5042			
BsmBI	2	2492,	4176		
BspHI	3	84,	1092,	7747	
BspMI	3	2734,	3976,	6295	
BsrBI	4	80,	1876,	2819,	3177
BsrDI	2	683,	865		
BsrGI	1	5378			
Bst1107I	1	4054			
BstAPI	2	2729,	3005		
BstBI	3	2288,	5056,	5844	
BstEII	1	5495			
Bsu36I	1	5500			
Cfr10I	4	839,	2768,	5157,	6316
ClaI	1	6252			
DraIII	2	2713,	3006		
DrdI	4	1704,	2928,	3309,	4130
Eco52I	3	2635,	2800,	3370	
Eco57I	4	237,	1285,	5716,	6900
EcoNI	1	6501			
EcoO109I	4	3726,	3747,	6066,	7711
EcoRV	1	6224			
EheI	2	3953,	4920		
FspI	2	699,	2089		
HaeII	4	1568,	1930,	3953,	4920
HindIII	1	3965			
HpaI	3	4331,	4557,	7303	
KasI	2	3953,	4920		
MluI	1	2349			
NarI	2	3953,	4920		
NcoI	3	2782,	3754,	3840	
NdeI	1	2879			
PacI	1	6208			
PciI	1	1810			
PpuMI	2	3747,	6066		
PshAI	1	2453			
Psp1406I	2	321,	694		
PspOMI	1	3726			
PstI	3	2378,	2763,	3974	
PvuI	2	552,	2791		
RsrII	1	2837			
SacII	1	3207			
SanDI	1	3747			
SapI	2	1926,	5695		
ScaI	2	441,	3398		
SgfI	1	2790			
SgrAI	1	6315			

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SphI	1	5547			
SspI	3	117,	7018,	7171	
Tth111I	4	2487,	2931,	3743,	4078
Van91I	3	2076,	2125,	6740	
VspI	2	748,	7107		
XbaI	3	4828,	4935,	6588	
XcmI	2	3722,	5616		
XmnI	1	320			