

STATEMENT ON A NONPROPRIETARY NAME ADOPTED BY THE USAN COUNCIL

USAN (NO-91)
Formerly (EF-26)

LISOCABTAGENE MARALEUCEL

PRONUNCIATION

lis" oh kab' ta jeen mar" a loo' sel

THERAPEUTIC CLAIM

Cancer immunotherapy for patients with advanced CD19+ B cell malignancies

DESCRIPTION

Autologous CD4+ and CD8+ T cells expressing a CD19-specific chimeric antigen receptor (CAR; comprised of an FMC63 monoclonal antibody-derived single chain variable fragment (scFv), IgG-derived spacer, CD28 transmembrane domain, CD137 [4-1BB] costimulatory domain, and CD3 zeta signaling domain) and a truncated epidermal growth factor receptor (EGFRt)

VECTOR SEQUENCE

Table of Features

Feature	Location (bp)
5' LTR	1 to 234
Psi packaging	286 to 417
Splice Donor (SD)	344 to 345
gag partial	390 to 1020
RRE	1019 to 1351
FLAP	1354 to 1532
Splice Acceptor (SA)	1509 to 1510
EF1alpha promoter with HTLV-1 R	1588 to 2131
Human GMCSFRalpha signal peptide	2148 to 2213
Anti-CD19 scFv	2214 to 2948
IgG4 hinge	2949 to 2984
CD28 Trans Membrane	2985 to 3068
41BB endo	3069 to 3194
CD3 zeta	3195 to 3530
T2A	3531 to 3602
Human GMCSFRalpha signal peptide	3603 to 3668
EGFRt	3669 to 4676
WPRE	4727 to 5315
3'LTR SIN (self-inactivating)	5406 to 5639

STRUCTURE

Sequence

```

1   ggagtgggcga gccctcagat cctgcatata agcagctgct ttttgccctgt actgggtctc
61  tctggttaga ccagatctga gcctgggagc tctctggcta actagggaac ccactgctta
121 agcctcaata aagcttgccct tgagtgtctc aagtagtgtg tgcccgtctg ttgtgtgact
181 ctggtaacta gagatccctc agaccctttt agtcagtgtg gaaaatctct agcagtggcg
241 cccgaacagg gacttgaaag cgaaagggaa accagaggag ctctctcgac gcaggactcg
301 gcttgctgaa gcgcgcacgg caagaggcga ggggcggcga ctggtgagta cgccaaaaat
361 tttgactagc ggaggctaga aggagagaga tgggtgctgag agcgtcagta ttaagcgggg
421 gagaattaga tcgatgggaa aaaattcggg taaggccagg gggaaagaaa aaatataaat
481 taaaacatat agtatgggca agcagggagc tagaacgatt cgcagttaat cctggcctgt
541 tagaaacatc agaaggctgt agacaaatac tgggacagct acaaccatcc cttcagacag
601 gatcagaaga acttagatca ttatataata cagtagcaac cctctattgt gtgcatcaaa
    
```

661 ggatagagat aaaagacacc aaggaagctt tagacaagat agaggaagag caaaacaaaa
721 gtaagaaaaa agcacagcaa gcagcagctg acacaggaca cagcaatcag gtcagccaaa
781 attaccctat agtgcagaac atccaggggc aaatggtaca tcaggccata tcacctagaa
841 ctttaaattgc atgggtaaaa gtagtagaag agaaggcttt cagcccagaa gtgataccca
901 tgttttcagc attatcagaa ggagccaccc cacaagattt aaacaccatg ctaaacacag
961 tgggggggaca tcaagcagcc atgcaaatgt taaaagagac catcaatgag gaagctgag
1021 gcaaagagaa gagtgggtgca gagagaaaaa agagcagtgga gaataggagc tttgttcctt
1081 gggttcttg gaggcagcagg aagcactatg ggcgagcgt caatgacgct gacggtacag
1141 gccagacaat tattgtctgg tatagtgcag cagcagaaca atttgctgag ggctattgag
1201 gcgcaacagc atctgttgca actcacagtc tggggcatca agcagctcca ggcaagaatc
1261 ctggctgtgg aaagatacct aaaggatcaa cagctcctgg ggatttgggg ttgctctgga
1321 aaactcatt gaccactgac tgtgccttgg atctacaaat ggcagtattc atccacaatt
1381 ttaaaagaaa aggggggatt ggggggtaca gtgcagggga aagaatagta gacataatag
1441 caacagacat acaaaactaaa gaattacaaa aacaaattac aaaaattcaa aattttcggg
1501 tttattacag ggacagcaga gatccagttt ggggatcaat tgcaggaaga atctgcttag
1561 ggtaggctg tttgagctgc ttgcgagga tctgcatcg ctccggtgcc cgtcagtgag
1621 cagagcgcac atcgcccaca gtccccgaga agttgggggg aggggtcggc aattgaaccg
1681 gtgcctagag aagggtggcgc ggggtaaaact gggaaagtga tgtcgtgtac tggctccgcc
1741 tttttcccga ggggtggggga gaaccgtata taagtgcagt agtcgcccgtg aacgttcttt
1801 ttgcgaacgg gtttgccgcc agaacacagc tgaagcttcg aggggctcgc atctctcctt
1861 cacgcgccc cgcacctacc tgaggccgcc atccacgcc gttgagtcgc gttctgccc
1921 ctcccgctg tgggtgcctcc tgaactgctg ccgcccgtca ggtaagtta aagctcaggt
1981 cgagaccggg cttttgtccg gcgctccctt ggagcctacc tagactcagc cggctctcca
2041 cgctttgcct gaccctgctt gctcaactct acgtctttgt ttcgttttct gttctgccc
2101 gttacagatc caagctgtga ccggcgccca cggctagcgc cggcaccatg ctgctgctgg
2161 tgaccagcct gctgctgtgc gagctgcccc accccgcctt tctgctgatc cccgacatcc
2221 agatgacca gaccacctcc agcctgagcg ccagcctggg cgaccgggtg accatcagct
2281 gccgggcccag ccaggacatc agcaagtacc tgaactggta tcagcagaag cccgacggca
2341 ccgtcaagct gctgatctac cacaccagcc ggctgcacag cggcgtgccc agccggtta
2401 gcgcgccagg ctccggcacc gactacagcc tgaccatctc caactggaa caggaagata
2461 tcgcccacta cttttgccag cagggcaaca cactgcccta cacctttggc ggcggaaca
2521 agctggaat caccggcagc acctccggca gcggcaagcc tggcagcggc gagggcagca
2581 ccaagggcga ggtgaagctg caggaaagcg gccctggcct ggtggcccc agccagagcc
2641 tgagcgtgac ctgcaccgtg agcggcgtga gcctgcccga ctacggcgtg agctggatcc
2701 ggcagcccc caggaagggc ctggaatggc tgggctgat ctggggcagc gagaccacct
2761 actacaacag cgccctgaag agccggctga ccatcatcaa ggacaacagc aagagccagg
2821 tgttcttgaa gatgaacagc ctgcagaccg acgacaccgc catctactac tgcgccaagc
2881 actactacta cggcggcagc tacgccatgg actactgggg ccagggcacc agcgtgaccg
2941 tgagcagcga atctaagtac ggaccgcctt gcccccttg ccctatgttc tgggtgctgg
3001 tgggtgctcg aggcgtgctg gcctgctaca gcctgctggt caccgtggcc ttcacatct
3061 tttgggtgaa acggggcaga aagaaactcc tgtatatatt caaacaacca tttatgagac
3121 cagtacaaac tactcaagag gaagatggct gtagctgccg atttccagaa gaagaagaag
3181 gaggatgtga actgcggggtg aagttcagca gaagcgccga cggccctgcc taccagcagg
3241 gccagaatca gctgtacaac gagctgaacc tgggcagaag ggaagagtac gacgtcctgg
3301 ataagcggag aggcggggac cctgagatgg gcggcaagcc tcggcggaag aacccccagg
3361 aaggcctgta taacgaactg cagaaagaca agatggccga ggcctacagc gagatcggca
3421 tgaagggcga gcggagggcg ggcaagggcc acgacggcct gtatcagggc ctgtccaccg
3481 ccaccaagga tacctacgac gccctgcaca tgcaggccct gcccccaagg ctcgagggcg
3541 gcggagaggg cagaggaagt cttctaacat gcgggtgacgt ggaggagaat cccggcccta
3601 ggatgcttct cctgggtgaca agccttctgc tctgtgagtt accacacca gcattcctcc
3661 tgatcccacg caaagtgtgt aacggaatag gtattggtga atttaaagac tcaactctca
3721 taaatgctac gaatattaaa cacttcaaaa actgcacctc catcagtggt gatctccaca
3781 tcctgcccgt ggcatttagg ggtgactcct tcacacatac tcctcctctg gatccacagg
3841 aactggatat tctgaaaacc gtaaaggaaa tcacaggggt tttgctgatt caggcttggc
3901 ctgaaaacag gacggacctc catgcctttg agaacctaga aatcatacgc ggcaggacca
3961 agcaacatgg tcagttttct cttgcagtcg tcagcctgaa cataacatcc ttgggattac
4021 gctccctcaa ggagataagt gatggagatg tgataatttc aggaacaaa aatttgtgct
4081 atgcaaatac aataaactgg aaaaaactgt ttgggacctc cggtcagaaa accaaaatta
4141 taagcaacag aggtgaaaac agctgcaagg ccacaggcca ggtctgcat gccttgtgct
4201 cccccgaggg ctgctggggc ccggagccca gggactgcgt ctcttgccgg aatgtcagcc
4261 gaggcagggg atgctgggac aagtgcaacc ttctggaggg tgagccaagg gagtttggg
4321 agaactctga gtgcatacag tgccaccag agtgccctgcc tcaggccatg aacatcacct

4381 gcacaggacg gggaccagac aactgtatcc agtgtgccca ctacattgac ggccccact
 4441 gcgtaacgac ctgcccggca ggagtcattg gagaaaaca caccctggtc tggagtagc
 4501 cagacgccgg ccatgtgtgc cacctgtgcc atccaaactg cacctacgga tgcactgggc
 4561 caggtcttga aggctgtcca acgaatgggc ctaagatccc gtccatcgcc actgggatgg
 4621 tggggggcct cctcttgctg ctgggtgggg ccctggggat cggcctcttc atgtgagcgg
 4681 ccgctctaga cccgggctgc aggaattcga tatcaagctt atcgataatc aacctctgga
 4741 ttacaaaatt tgtgaaagat tgactgggat tcttaactat gttgctcctt ttacgctatg
 4801 tggatacgct gctttaatgc ctttgatca tgctattgct tcccgtatgg ctttcatttt
 4861 ctccctcctg tataaatcct ggttgctgtc tctttatgag gattgtggc ccgttgtcag
 4921 gcaacgtggc gtgggtgtgca ctgtgtttgc tgacgcaacc cccactgggt ggggcattgc
 4981 caccacctgt cagctccttt ccgggacttt cgctttcccc ctccctattg ccacggcgga
 5041 actcatcgcc gcctgccttg cccgctgctg gacaggggct cggctggttg gactgacaa
 5101 ttccgtgggt ttgtcgggga aatcatcgtc ctttccttgg ctgctcgcct gtgttgccac
 5161 ctggattctg cgcgggacgt ccttctgcta cgtcccttcg gccctcaatc cagcggacct
 5221 tccttcccgc ggctgctgc cggctctgcg gcctcttcgg cgtcttcgcc ttcgccctca
 5281 gacgagtcgg atctcccttt gggccgcctc cccgcatcga taccgtcgac tagccgtacc
 5341 ttaagacca atgacttaca aggcagctgt agatcttagc cactttttaa aagaaaagg
 5401 gggactggaa gggctaattc actcccaaag aagacaagat ctgctttttg cctgtactgg
 5461 gtctctctgg ttagaccaga tctgagcctg ggagctctct ggctaactag ggaaccact
 5521 gcttaagcct caataaagct tgccttgagt gcttcaagta gtgtgtgccc gtctgttgtg
 5581 tgactctggt aactagagat ccctcagacc cttttagtca gtgtggaaaa tctctagca

TRADEMARK

BREYANZI

SPONSOR

Juno Therapeutics, Inc. (a Bristol-Myers Squibb Company)

CODE DESIGNATION

JCAR017

UNII

7K2YOJ14X0

WHO NUMBER

10805

bww