

STATEMENT ON A NONPROPRIETARY NAME ADOPTED BY THE USAN COUNCIL

USAN (KL-143) ONTASAMERAN

PRONUNCIATION on ta" sa mer' an

THERAPEUTIC CLAIM Antineoplastic

CHEMICAL NAME

RNA (recombinant [1,2-[m7Gm-p-[P(R)]-sp-p-G]]-capped human transmembrane phosphatase with tensin homology (TPTE)-specifying poly(A)-tailed messenger RBL004.3), inner salt (Source: CAS)

STRUCTURAL FORMULA

Nucleotide sequence 5' → 3':

GGGCGAACUA GUAUUCUUCU GGUCCCCACA GACUCAGAGA GAACCCGCCA 50
CCAUGAGAGU GAUGGCCCCC AGAACCCUGA UCCUGCUGCU GUCUGGCGCC 100
CUGGCCCUGA CAGAGACAUG GGC CGGAAGC GGC GG CUCUG GAGGAGGCGG 150
UCCCGGAGGC AUGAACGAGA GCCCGGACCC UACAGAUUCG GCCGGCUGA 200
UCAUCGAGCU GGGACCCAAC GAUAGCCUC AGACCAGCGA GUUCAAGGGG 250
GCCACAGAGG AAGCCCCUGC CAAAGAGAGC CCCCACACCU CCGAGUUUAA 300
GGGCGCUGCU CGGGUGUCCC CUAUCAGCGA GAGCGUGCUG GCCCGCUGA 350
GCAAGUUCGA GGUGGAGGAC GCCGAGAACG UGCCCAGCUA CGACAGCAAG 400
AUCAAGAAAA UCGUGCACAG CAUCGUGUCC AGCUUCGCCU UCGGCCUGUU 450
CGGCGUGUUC CUGGUGCUGC UGGACGUGAC ACUGAUCCUG GCCGACCUGA 500
UCUUCACCGA CAGCAAGCUG UACAUCACCC UGGAUACCG GUCCAUCAGC 550
CUGGCCAUUG CCCUGUUUCU UCUGAUGGAC GUGCUGCUGC GGGUGUUCGU 600
GGAGCGGCGG CAGCAGUACU UCAGCGACCU GUUCAACAUC CUGGACACCG 650
CCAUCAUCGU GAUUCUGCUG CUGGUGGAGU UGGUGUACAU CUUCUUCGAC 700
AUCAAGCUGC UGAGAAACAUC CCCCGGUGG ACCCAUCUGC UGCGGCUGCU 750
GAGACUGAUC AUCCUGCUGC GGAUCUUCCA CCUGUUCAC CAGAAGCGGC 800
AGCUGGAAAA GCUGAUCAGA CCGCGGGUGU CCGAGAACAA GCGGCGGUAC 850
ACCAGGACG GCUUCGACCU GGACCUAGC UACGUGACCG AGCGGAUCAU 900
UGCCAUGAGC UUCCCCAGCA GCGGCAGACA GAGCUUCUAC CGGAACCCCA 950
UCAAGAAGU GGUGCGGUUC CUGGACAAGA AGCACCGGAA CCACUACCGG 1000
GUGUACAACC UGUGCAGCGA GCGGGCCUAC GACCCCAAGC ACUUCACAA 1050
CCGGGUGGUG CGGAUCAUGA UCGACGACCA CAACGUGCCC ACCCUGCACC 1100
AGAUGGUGGU GUUCACAAA GAAGUGAACG AGUGGAUGGC CCAGGACCUG 1150
GAAAACAUCG UGGCAUCCA CUGCAAGGGC GGCACCGACA GAACCGGCAC 1200
CAUGGUGUGC CCUUUCUGA UCGCCAGCGA GAUCUGUAGC ACCGCCAAAG 1250
AGUCCUGUA CUACUUCGGC GAGCGGAGAA CCGACAAGAC CCACAGCGAG 1300
AAGUUCAGG GCGUGGAGAC ACCCAGCCAG AAAAGAUUUG UGGCUUACUU 1350
CGCCAGGUG AAGCACCUGU ACAACUGGAA CCUGCCCCC AGACGGAUUC 1400
UGUUCAUCA GCACUUAUC AUCUACAGCA UCCCCAGUA CGUGCGGGAC 1450
CUGAAGAUC AGAUCGAGAU GGAAGAGAAA GUGGUGUUA GCACCAUCUC 1500
CCUGGGCAAG UGCAGCGUGU UGGAACAACU CACCACCGAC AAGAUCUGA 1550
UCGACGUGU CGACGGCCUG CCCUGUACG ACGACGUGAA GGUGCAGUUC 1600
UUCUACAGCA ACCUGCCAC CUACUACGAC AAUUGCAGCU UCUACUUCUG 1650
GCUGCACACC AGCUUAUCG AGAACAACAG GCUGUACCUG CCAAGAACG 1700
AGCUGGACAA CCUGCACAAG CAGAAGGCCA GAAGAAUCUA CCCCAGCGAC 1750
UUCGCGGUGG AGAUCCUGU UGGCGAGAAG AUGACCAGCA GCGACGUGGU 1800
GGCCGGCAGC GGAGGAUCCG GUGGUGGCGG CAGCGGCGG AAGAAGCAGU 1850
ACAUCAAGGC CAACAGCAAG UUCAUCGGCA UCACCGAGCU GAAGAAGCUG 1900
GGAGGGGCA AACGGGAGG CGGCAAAAAG AUGACCAACA GCGUGGACGA 1950
CGCCUGAUC AACAGCACCA AGAUCUACAG CUACUUCCCC AGCGUGAUA 2000
GCAAAGUGAA CCAGGGCGCU CAGGGCAAGA AACUGGGCUC UAGCGGAGGG 2050
GGAGGCUUC CUGGCGGGG AUUCUAGCAUC GUGGGAAUUG UGGCAGGACU 2100
GGCAGUGCUG GCCGUGGUGG UGAUCGGAGC CGUGGUGGCU ACCGUGAUGU 2150
GCAGACGGAA GUCCAGCGGA GGCAAGGGCG GCAGCUACAG CCAGGCCGCC 2200

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AGCUCUGAUA GCGCCAGGG CAGCGACGUG UCACUGACAG CCUAGUAACU 2250
CGAGCUGGUA CUGCAUGCAC GCAAUGCUAG CUGCCCCUUU CCGUCCUGG 2300
GUACCCCGAG UCUCCCCGA CCUCGGGUCC CAGGUAUGCU CCCACCUCCA 2350
CCUGCCCCAC UCACCACCUC UGCUAGUUC AGACACCUC CAAGCACGCA 2400
GCAAUGCAGC UCAAAACGCU UAGCCUAGCC ACACCCAC GGGAAACAGC 2450
AGUGAUUAAC CUUAGCAAU AAACGAAAGU UUAACUAAGC UAUACUAACC 2500
CCAGGUUGG UCAAUUUCGU GCCAGCCACA CCGAGACCUG GUCCAGAGUC 2550
GCUAGCCGCG UCGCUAAAAA AAAAAAAAAA AAAAAAAAAA AAAAAGCAUA 2600
UGACUAAAAA AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA 2650
AAAAAAAAA AAAAAAAAAA AAAAA 2675

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Feature	Description	Position
Capping Structure	phosphorothioate-stabilized cap analogue	1
hAg-Kozak	human ct-globin - Kozak region	2-52
Sec	secretion signal sequence.	53-130
GS-rich linkers	Sequences that code for short linker peptides generally consisting of the amino acids glycine and serine	131-160, 1811-1840 and 2036-2077
MAGE-A3	Codon-optimized sequences encoding the protein MAGE-A3	161-1810
P2P16	Sequence coding for tetanus toxin-derived helper epitopes	1841-2035
MITD	transmembrane and cytoplasmic domains of MHC class I molecule	2078-2248
FI	sequence element derived of the amino terminal enhancer of splitRNA (F) and from the mitochondrially encoded I2S RNA (I)	2249-2556
Poly(A)	A poly(A)-tail measuring 110 nucleotides in length.	2566-2675

MOLECULAR FORMULA C₂₅₅₂₉H₃₁₆₇₃N₁₀₄₆₈O₁₈₄₇₇P₂₆₇₇S

MOLECULAR WEIGHT 863.7 kDa

TRADEMARKS None yet

SPONSOR BioNTech SE

CODE DESIGNATIONS RBL004.3

CAS REGISTRY NUMBER 2348561-00-0

UNII WVT3HJM1DN

WHO NUMBER 11480

SCS