STATEMENT ON A NONPROPRIETARY NAME ADOPTED BY THE USAN COUNCIL

USAN (MN-246)	LONIMECGENE RENPARVOVEC
PRONUNCIATION	loe ni ' mek jeen ren par' voe vek
THERAPEUTIC CLAIM	Treatment of patients with Rett Syndrome

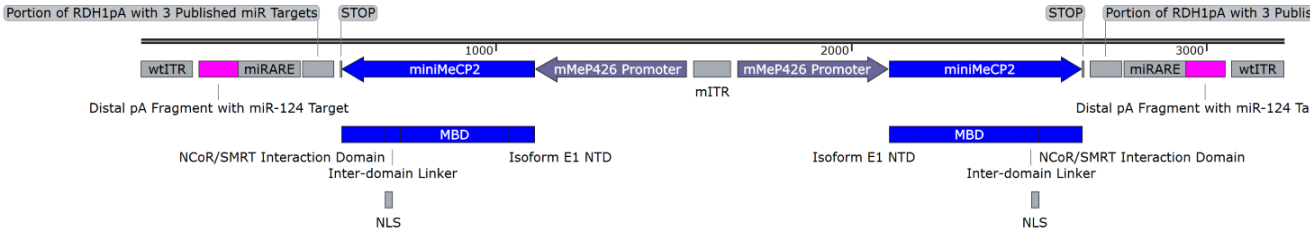
DESCRIPTION

DNA (self-complementary adeno-associated virus 9 vector TSHA-102 mouse neuronal-specific promoter MeP426 variant plus human gene MECP2 fragment plus microRNA-binding element RDH1pA plus miRARE (miRNA responsive auto-regulatory element) plus human gene MECP2 downstream polyadenylation signal plus adeno-associated virus 2 inverted terminal repeat flanks-specifying).

Recombinant, non-replicating adeno-associated virus type 9 (AAV9) vector carrying the human miniMECP2 DNA and miR-Responsive Auto-Regulatory Element (miRARE), with expression controlled by a MeP426 promoter. The AAV9 capsid is used to deliver the miniMECP2 gene to the primary therapeutic targets in the central nervous system (CNS).

STRUCTURE/SEQUENCE/DIAGRAM

Figure 1: Genetic Map of the entire product:



Linear DNA sequence (bp): 3214bp

Table with position of features:

Feature	**Description**	**Nucleotide Coordinates (Size in bp)**
wtITR (antisense)	wild-type (wt) adeno-associated virus serotype 2 (AAV2) inverted terminal repeat (ITR)	1 – 145 (145)
Distal pA fragment with miR-124 target (antisense)	Polyadenylation (polyA) and miRNA target domain (miR-124) from the replication dependent histone 1 polyA tail (RDH1pA)	164-273 (110)
miRARE (antisense)	miRARE element (miRNA targets for miR-9-5p, miR-26-5p, miR-23-3p, miR-218-5p, miR-27a-3p and let-7e-5p/98-5p)	274-448 (175)
Portion of RDH1pA with 3 miRNA targets (antisense)	RDH1polyA region with 3 miRNA targets (miR-22, miR-19, miR-132)	455-543 (89)
miniMeCP2 (antisense)	miniaturized form of Methyl-CpG binding Protein 2 (miniMeCp2) gene • *NCoR/SMRT Interaction Domain (NID)*: 565-687 (123) • *Inter-domain Linker:* 688-729 (42) • *SV40 NLS:* 688-708 (21)	562-1107 (546)

	• *Methyl-CpG Binding Domain (MBD):* 730-1035 (306) • *Isoform E1 N-terminal Domain (NTD)*: 1036-1107 (72)	
mMEP426 Promoter (antisense)	mMEP426 promoter: 426 base fragment of the mouse MeCp2 promoter	1110-1535 (426)
mutITR	mutant adeno-associated virus serotype 2 (AAV2) inverted terminal repeat (ITR)	1555-1660 (106)
mMEP426 Promoter	mMEP426 promoter: 426 base fragment of the mouse MeCp2 promoter	1680-2105 (426)
miniMeCP2	miniaturized form of Methyl-CpG binding Protein 2 (miniMeCp2) gene • *Isoform E1 N-terminal Domain (NTD): 2108–2179 (72)* • *Methyl-CpG Binding Domain (MBD):* 2180-2485 (306) • *Inter-domain Linker:* 2486-2527 (42) • *SV40 NLS*: 2507-2527 (21) • *NCoR/SMRT Interaction Domain (NID):* 2528-2650 (123)	2108-2653 (546)
Portion of RDH1pA with 3 miRNA targets	RDH1poly A region with 3 miRNA targets (miR-22, miR-19, miR-132)	2672-2760 (89)
miRARE	miRARE element (miRNA targets for miR-9-5p, miR-26-5p, miR-23-3p, miR-218-5p, miR-27a-3p and let-7e-5p/98-5p)	2767-2941 (175)
Distal pA fragment with miR-124 target	PolyA and miRNA target domain (miR-124) from RDH1pA	2942-3051 (110)
wtITR	wild-type adeno-associated virus serotype 2 (AAV2) inverted terminal repeat (ITR)	3070-3214 (145)

Vector Sequence

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TTGGCCACTC CCTCTCTGCG CGCTCGCTCG CTCACTGAGG CCGCCGGCCC   50
AAAGGGCCGG CGTCGGGCGA CCTTTGGTCG CCCGGCCTCA GTGAGCGAGC  100
GAGCGCGCAG AGAGGGAGTG GCCAACTCCA TCACTAGGGG TTCCTAGATC  150
TGCATGCACG CGTGATTTTT ACAACAAAAG ACACAAACGG ACATTTTTAT  200
GTAAATTTAT AAGGCAAACT CTTTATATAA TAAATAGGTT ACACCTTTTG  250
TTTTTAAATA TATCAGTGCT TTCGTTATCG GCTGAGGTAG ATTACTGCTT  300
CTTTTTGTAA AATTCACAGC ATAATTGTGA GTCGCCAGAA CTTGTGCTAT  350
CAGCTTACAC TGCCTAAAAT TTTCACATCT ATGTCTTTGG TTTTCAAGAC  400
TTCAAGTTTC AAAAGCAAGC ACAGAAAACT CTTTGGGGGC TAGAACAGGT  450
CGACCACACA TTGAGTAACA GTCCTGGTGA TATTCCTAGT TTAGAAAAGT  500
GCAAAGCTAC TTCTGAAGAG ACAACAGCTG CCTTTATTCT TGTGAGGCTG  550
ATCAGCGAGC TCTAGACCGT CTCCCGGGTC TTGCGCTTCT TGATGGGGAG  600
TACGGTCTCC TGCACAGATC GGATAGAAGA CTCCTTCACG GCTTTCTTTT  650
TGGCCTCGGC GGCAGCGGCT GCCACCACAC TCCCCGGCAC CTTCCGCTTT  700
TTCTTGGGCC CAGAGCTGCC ACTGGATCCA GGTGGTTTCT GCTCTCGCCG  750
GGAGGGGCTC CCTCTCCCAG TTACCGTGAA GTCAAAATCA TTAGGGTCCA  800
GGGATGTGTC GCCTACCTTT TCGAAGTACG CAATCAACTC CACTTTAGAG  850
CGAAAGGCTT TTCCCTGGGG ATTGATCAAA TACACATCAT ACTTCCCAGC  900
AGAGCGGCCA GATTTCCTTT GCTTAAGCTT CCGTGTCCAG CCTTCAGGCA  950
GGGTGGGGTC ATCATACATG GGTCCCCGGT CACGGATGAT GGAGCGCCGC 1000
TGTTTGGGGG AGGCAGAAGC TTCCGGCACA GCCGGCTTTT CTTCCAGTCT 1050
CTCCTCCTCG CCTCCTCCTC CTCCTCCGCT CGGCGCGGCG GCGGCGGCGG 1100
CGGCCATGGT TTCCGGACGG GTTTTACCAC AGCCCTCTCT CCGAGAGGAG 1150
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TTCTACTGTC ACTTGGAAAA AAGAGGCGGC TAGGGCACAG AGGGGCTGGT 1450
TTTGTGGGCA GCATTTGAAT GTTGAGGATT AACTGGGCCC TTGTGGACTC 1500
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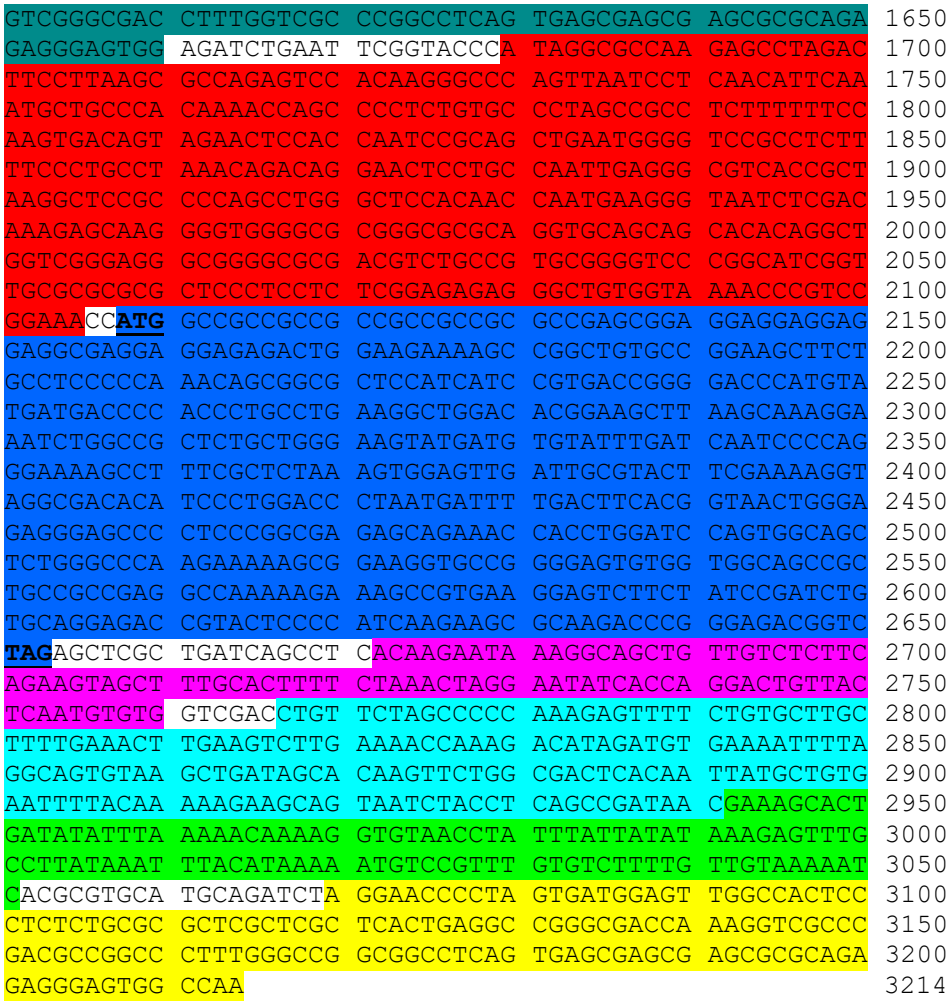

SPONSOR	Taysha Gene Therapies, Inc.
CODE DESIGNATION	TSHA-102
CAS NUMBER	2856375-48-7
UNII	NVK87P6NXW
WHO NUMBER	12970

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