Supplementary Materials: Development of Therapeutic Chimeric Uricase by Exon Replacement/Restoration and Site-Directed Mutagenesis

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Table S1. Primers used for exon replacement and restoration (overlapping sequences designed for SOE-PCR are colored).

Primer	Description	Sequence
P1	Forward primer for *wpu* exon1 with restriction site *Nde* I (underlined)	5′-GGAATTCCATATGGCTCATTACCGTAATGACT-3′
P2	Reverse primer for *wpu* exon 2	5′-GCCTTTGAACTTCGCCAGGACATTAACTGTG-3′
P3	Forward primer for *wpu* exon 3	5′-ATCAAAAGCATAGAAACTTTTGCTGTGAC-3′
P4	Reverse primer for *wpu* exon 3	5′-CTTTTCAAAACGCTTCCAAGGAACTTCTTCCAC-3′
P5	Forward primer for *wpu* exon 4	5′-AATGGAGTTAAGCATGTCCATGCATTTA-3′
P6	Reverse primer for *wpu* exon 4	5′-ATTCCTTATCTGTTCAACCTCACAGAAGTGCG-3′
P7	Forward primer for *wpu* exon 5	5′-GGACCTCCAGTCATTCATTCTGGAATC-3′
P8	Reverse primer for *wpu* exon 5	5′-CCAGGTGGCCTCAAAGTCCACATCTCTGCCC-3′
P9	Forward primer for *wpu* exon 6	5′-GACACTGTTAGGAGCATTGTCCTGCAGA-3′
P10	Reverse primer for *wpu* exon 6	5′-CTCAGGAACCTGGCCCAGGGTGAGCACCTGGATGT-3′
P11	Forward primer for *wpu* exon 7	5′-ATAGAAGATATGGAAATCAGCCTGCCAA-3′
P12	Reverse primer for *wpu* exon 8 with restriction site *Hind* III (underlined)	5′-CCCAAGCTTTCACAGCCTTGAAGTCAGC-3′
P13	Forward primer for *dhu* exon1 with restriction site *Nde* I (underlined)	5′-GGAATTCCATATGGCCCACTACCATAACAAC-3′
P14	Reverse primer for *dhu* exon 2	5′-AAAAGTTTCTATGCTTTTGATTTCTTTAAACTTTGCCA-3′
P15	Forward primer for *dhu* exon 3	5′-TGTCCTGGCGAAGTTCAAAGGCATCAAAAGCATAGAAG-3′
P16	Reverse primer for *dhu* exon 3	5′-GCATGGACATGCTTAACTCCATTCTTTCCAAGATGCTT-3′
P17	Forward primer for *dhu* exon 4	5′-GAAGCGTTTTGAAAAGAATGGAGTTAAGCATGTC-3′
P18	Reverse primer for *dhu* exon 4	5′-GAATGAATGACTGGAGGTCCACTTCTCAGCTGTTCAA-3′
P19	Forward primer for *dhu* exon 5	5′-TGAACAGATAAGGAATGGACCCCAAGTCATTC-3′
P20	Reverse primer for *dhu* exon 5	5′-ACAATGCTCCTAACAGTGTCCCAGGTAGCCTTGAAGT-3′
P21	Forward primer for *dhu* exon 6	5′-ACTTTGAGGCCACCTGGGACACCATTCGGGAC-3′
P22	Reverse primer for *dhu* exon 6	5′-GCTGATTTCCATATCTTCTATCGCAGGAACTCGGCTC-3′
P23	Forward primer for *dhu* exon 7	5′-TGGGCCAGGTTCCTGAGATAGAAGATATGGAAATC-3′
P24	Reverse primer for *dhu* exon 8 with restriction site *Hind* III (underlined)	5′-CCCAAGCTTTCACAGTCTTGAAGACAACTTCC-3′
P25	Forward primer for amino acid fragment 22–304 of $H_{1\text{-}2}P_3H_4P_{5\text{-}6}H_{7\text{-}8}$ and should be paired with P24	5′-GAAGGATATGGTAAAAGTTTTGCATATTCAGCGAGATGGAAAGT-3′
P26	Reverse primer for amino acid fragment 1–36 of $H_{1\text{-}2}P_3H_4P_{5\text{-}6}H_{7\text{-}8}$ and should be paired with P13	5′-ACTTTCCATCTCGCTGAATATGCAAAACTTTTACCATATCCTTC-3′
P27	Forward primer for amino acid fragment 79–304 of $H_{1\text{-}2}P_3H_4P_{5\text{-}6}H_{7\text{-}8}$ (E24D) and should be paired with P24	5′-GGCAAAGTTTAAAGGCATCAAAAGCATAGAAG-3′
P28	Reverse primer for amino acid fragment 1–84 of $H_{1\text{-}2}P_3H_4P_{5\text{-}6}H_{7\text{-}8}$ (E24D) and should be paired with P13	5′-GATGCCTTTAAACTTTGCCAAGACATGAAC-3′

The primer in red is the overlapping sequence used in SOE-PCR.