

金斯瑞 PE2/PE3 mRNA (Cap1, m1Ψ)

先导编辑体系 (Prime editing, PE) 由带有逆转录酶结构域的 Cas9 缺口酶融合蛋白和 pegRNA 两部分组成, Cas9-逆转录酶会在 pegRNA 的引导下, 精准地切开靶标 DNA 单链, 然后根据 pegRNA 中的“逆转录模板”, 合成含有正确序列的 DNA。先导编辑体系的优势在于: 不产生 DNA 双链断裂(DBS), 不需要 DNA 模板就可以实现定向编辑, 减少了脱靶率。PE2/PE3 mRNA 序列来源于文献: Nelson, et al. *Nat Biotechnology*, 2022; 40: 402-410。

金斯瑞该现货 mRNA 采用 Cap1 结构加帽, 具有较高的加帽效率, 显著提升 mRNA 的翻译效率和蛋白表达量。该 mRNA 全序列中的尿苷 (U) 被 100% 替换为 N1-甲基假尿苷 (N1-Methylpseudouridine/m1Ψ), 有效降低免疫原性并增强表达性能。此外, 该 mRNA 含有 100 个 Poly(A) 尾结构, 模拟成熟 mRNA 的天然特性, 进一步提高其稳定性与功能性。

名称	货号	规格
PE2/PE3 mRNA (N1-Methylpseudouridine/m1Ψ)	RP-A00044-0.1	0.1 mg
	RP-A00044-0.2	0.2 mg
	RP-A00044-1	1 mg

浓度: 1mg/mL

储存溶剂: 1mM Sodium citrate, pH 6.5

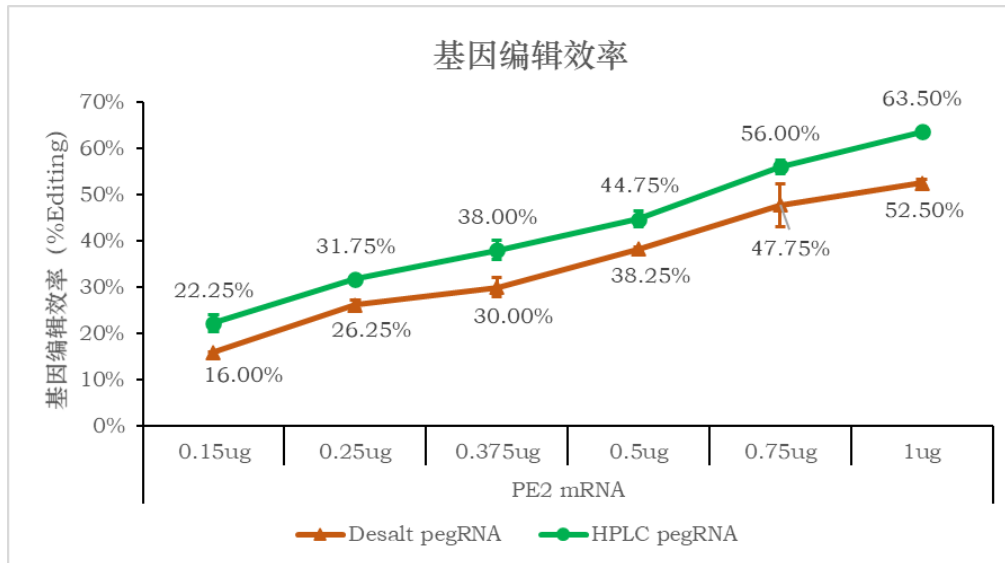
mRNA 全长: 6652 nt

mRNA 分子量: 2167186 Da

储存条件: 短期可储存于 -20℃ (3 个月内), 长期可储存于 -80℃

细胞表达实验结果:

实验方法: 将 PE2/PE3 mRNA 和 141 nt 的 pegRNA (序列为: mG*mG*mC*rCrCrArGrArCrUrGrArGrCrArCrGrUrGrArGrUrUrUrUrArGrArGrCrUrArGrArArUrArGrCrArArGrUrUrArArArArUrArArGrGrCrUrArGrUrCrCrGrUrUrArUrCrArArCrUrUrGrArArArArGrUrGrGrCrArCrCrGrArGrUrCrGrGrUrGrCrUrGrGrArGrGrArArGrCrArGrGrGrCrUrUrCrCrUrUrUrCrCrUrCrUrGrCrCrGrUrGrCrUrCrArGrUrCrUrG*mU*mU*mU) 通过电穿孔法转染至 HEK293T 细胞中。基因编辑效率通过 Sanger 测序在转染后两天进行检测。



PE2/PE3 mRNA ORF 序列:

ATGAAACGGACAGCCGACGGAAGCGAGTTCGAGTCACCAAAGAAGAAGCGGAAAGTC
GACAAGAAGTACAGCATCGGCCTGGACATCGGCACCAACTCTGTGGGCTGGGCCGTG
ATCACCGACGAGTACAAGGTGCCAGCAAGAAATTCAAGGTGCTGGGCAACACCGAC
CGGCACAGCATCAAGAAGAACCTGATCGGAGCCCTGCTGTTTCGACAGCGGCGAAACA
GCCGAGGCCACCCGGCTGAAGAGAACCGCCAGAAGAAGATACACCAGACGGAAGAA
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