



KI Enhancer Drug – Product Manual

- **Product Description**

This product consists of two small-molecule compounds (KI enhancer-1 and KI enhancer-2) designed to significantly boost knock-in (KI) efficiency in CRISPR/Cas-mediated gene editing using the homology-directed repair (HDR) pathway. Extensive in-house validation by EDITGENE experts has demonstrated that the insertion efficiency can be increased by 5–8 fold with the use of this enhancer system.

- **Product Components**

Product Name	Component	Concentration
KI Enhancer Drug	KI enhancer-1	1000×
	KI enhancer-2	1000×

- **Product Specifications**

Specification	50T	100T
Catalog No.	EDKI01-01	EDKI01-02

- **Instructions**

1. Delivering RNP (Ribonucleoprotein) complexes:

If transfection reagents are used to deliver both RNP and donor DNA, add the KI Enhancer Drug directly to the cell culture medium at a final concentration of 1/1000 (v/v) of the total culture volume simultaneously with transfection.

If electroporation is used for RNP and donor delivery, add the KI Enhancer Drug to the cell culture medium immediately after electroporation at a final concentration of 1/1000 (v/v). Mix thoroughly and incubate at 37°C for 24 hours.

After 24 hours, remove the medium containing the enhancer drug and replace it with fresh culture medium. Continue normal culturing and monitor KI efficiency after 3 days.

2. When delivering plasmids:

Transfect the plasmids using a suitable transfection reagent or electroporation method. After 24 hours of culture, add the KI Enhancer Drug to the cell culture medium at a final concentration of 1/1000 (v/v). Mix thoroughly and incubate at 37°C for 24 hours.

After incubation, remove the enhancer-containing medium, replace with fresh culture medium, and continue normal cell culture. Assess KI efficiency after 3 days of further incubation.

● Performance Demonstration

In HEK293T cells, the knock-in efficiency of GFP increased dramatically from 11.7% (without KI Enhancer Drug) to 82.0% (with KI Enhancer Drug), as shown in the figure below.

