



Swift4 Ligase Master Mix, 4X (T4LIGMM)

Catalog #MB6308-50, 150 µl, for 50 reactions

or

Catalog #MB6308-150, 600 µl, for 200 reactions

Introduction

ScienCell's Swift4 Ligase Master Mix (T4LIGMM) is a 4X premix that simplifies the reaction setup while also ensuring rapid ligation at room temperature. T4LIGMM is ideal for use with both sticky-end and blunt-end DNA and needs only 5 minutes for the ligation reaction. The 4X premix contains an optimized ratio of enzyme, buffer and transformation enhancer. As it maintains a liquid state during storage at -20 °C, no thawing of the master mix is required. Simply combine T4LIGMM and DNA, the resulting reaction mixture may then be used directly for bacterial transformation.

Kit Components

Catalog #MB6308-50

Cat #	Item	Quantity	Storage
MB6308-50	Swift4 Ligase Master Mix, 4X	150 µl	-20°C

Catalog #MB6308-200

Cat #	Item	Quantity	Storage
MB6308-200	Swift4 Ligase Master Mix, 4X	600 µl	-20°C

Quality Control

The performance of T4LIGMM is verified by transformation efficiency of recircularized vector.

Product Use

T4LIGMM is for research use only. It is not approved for human or animal use, or for application in clinical or in vitro diagnostic procedures.

Shipping and Storage

The product is shipped on dry ice. Upon receipt, store Swift4 Ligase Master Mix, 4X (Cat # T4LIGMM) at -20°C in a manual defrost freezer. Aliquot as needed.

Procedure

Important: Only use nuclease-free water.

1. Place Swift4 Ligase Master Mix, 4X on ice.
2. Prepare ligation reaction as shown in Table 1 or Table 2 (depending on type of ligation reaction required). For other reaction volume setups, scale up or down proportionally.

Table 1. Ligation reaction preparation – insertion of DNA into plasmid vector DNA

Component	Volume	Final concentration
Swift4 Ligase Master Mix, 4X	3 μ L	1X
Linearized vector DNA	variable	10-100 ng
Insert DNA	variable	3:1 molar excess over vector
Nuclease-free water (NOT provided)	to 12 μ L	-
Total volume per reaction	12 μ L	-

Table 2. Ligation reaction preparation – recircularization of linear DNA

Component	Volume	Final concentration
Swift4 Ligation Mix, 4X	3 μ L	1X
Linearized vector DNA	variable	10-50 ng
Nuclease-free water (NOT provided)	to 12 μ L	-
Total volume per reaction	12 μ L	-

3. Mix and incubate at room temperature at least 5 minutes.
4. Optional: the reaction mixture may be store at 0-4°C until used for transformation.
5. Use 5 μ l of the ligation mixture for transformation.