Product Manual

Product Name	pAG-Tn5 Transposome
Source	Recombinant expression in Escherichia coli
Catalog Number	CSB-DEM071
Physical Form	Liquid
Storage Conditions	-20° C
Molecular Weight	75 kDa
Storage Buffer	50mM HEPES (pH 7.2), 100mM NaCl, 0.1mM EDTA, 1mM DTT, 0.1% Triton X-100, 50% (v/v) Glycerol
Quality Control	No residual nucleases and exonucleases
Shelf Life	12 months

Product Description

The pAG-Tn5 Transposase is a fusion enzyme that combines Protein A/G with a modified and highly active Tn5 transposase. This fusion enzyme possesses both transposase and Protein A/G activities, making it suitable for CUT&Tag technology, which is used in protein-genome interaction studies.

CUT&Tag is a novel method for studying protein-DNA interactions and offers several advantages over traditional ChIP-seq, including time efficiency, minimal cell requirement, low background signal, good reproducibility, and even applicability to single-cell sequencing. CUT&Tag is a powerful tool for investigating protein-chromatin interactions in vivo and has significant implications in the study of gene regulation and epigenetics.

The Protein A/G component in this product primarily interacts with the Fc region of immunoglobulins and can bind to most mammalian IgGs.

Product Components

Label	Component	Specifications	
1	pAG-Tn5 Transposome(4 μM)	12μL	48μL

Applications

(1) DNA Fragmentation

Components	Reaction
DNA	50-100 ng
pAG-Tn5 Transposome	1 uL

WUHAN HUAMEI BIOTECH CO.,LTD

No.818 Gaoxin Avenue, Wuhan Hi-tech Medical Devices Park, Donghu High-tech Development Zone 430206, Wuhan City, Hubei Province, P.R. China.

www.cusag.cn / www.cusagivd.com cusag@cusag.cn +86-27-65521556/+86-27-87196282 Ext 853 +86-27-87196150

Tagment Buffer (5X)	5 uL
ddH2O	To 25 uL

Prepare a 25 µl fragmentation Reaction: thoroughly mix the system and incubate at 55°C for 10 minutes. Then add 5 µl of 5×Stop Buffer, mix well, and incubate at 55°C for 5 minutes to terminate the reaction. The fragmented product can be used for detection or library construction. If the fragmented fragments are too long, the amount of transposome can be increased to reduce the fragment size, and vice versa, the amount of transposome can be reduced.

(2) Amplification of Fragmented Products

1)Prepare the following components in a PCR tube:

Components	Volume
Fragmented DNA	30 µL
5×Pfu buffer	10 µL
N5 Primer（10 µM）	2.5 µL
N7 Primer（10 µM）	2.5 µL
Pfu DNA Polymerase[a]	1 µL
Total	50 µL

Note: a.PCR reactions should use a non-hot start Taq enzyme, such as CSB-DEM035, CSB-DEM034, CSB-DEM023.

2)Gently mix by pipetting 10 times to ensure thorough mixing, and perform the following reaction in a PCR machine:

Temperature	Time	Cycle Number
72°C	3 min	1
98°C	30 s	1
98°C 60°C 72°C	15 s 30 s 1 min	X[b]
72°C	5 min	1
4°C	Hold	---

Note: The number of amplification cycles can be adjusted according to the input DNA amount and experimental requirements.

(3) Library Length Distribution Analysis

Use a 2% agarose gel electrophoresis or Agilent 2100 Bioanalyzer to analyze the length distribution of the library.