pAG-MNase for CUT&RUN

Cat. No. : RK20560

ABclonal Technology®

Product components

Components	Component number	Size-1 200 U	Size-2 1000 U
pAG-MNase(10,000 U/mL)	RM20544	20 μL	100 μL
pAG-MNase Dilution Buffer	RM20820	1 mL	1 mL*3

Product Description

pAG-MNase for CUT&RUN fuses Protein A/ G and Micrococcal nuclease (MNase) to form a fusion enzyme with their dual activities. The molecular weight of pAG-MNase monomer is about 39.6 kD. It was developed using CUT&RUN technology specifically for protein-genome interaction research. The emergence of CUT&RUN technology has greatly simplified the ChIP-seq operation process, changing the ultrasonic fragmentation process to enzyme digestion, shortening the library preparation time, and the enzyme does not cleave histone encapsulated DNA, only fragments between nucleosomes. The Protein A/G fused in this product mainly interacts with the Fc region of immunoglobulin (Ig) and can bind to most mammalian IgGs.

Micrococcal Nuclease (MNase) is a nuclease derived from *Staphylococcus aureus*. It can degrade single-stranded, double-stranded, linear, and Circular and other forms of DNA or RNA, and produce 3' phosphate-terminated mononucleotides and oligonucleotides.

Source

pAG- MNase was recombinant, expressed and purified in *E. coli.*

Store

-20℃

Molecular weight

39.6 kD

Reaction conditions

In the reaction system with the existence of 1X Micrococcal Nuclease Reaction Buffer and 0.1 mg/mL BSA, perform the reaction at 37°C (DNA fragmentation, adjust according to different needs).

Note: 10X Micrococcal Nuclease Reaction Buffer: 500 mM Tris-HCl pH 8.0, 50 mM CaCl2. Affected by many factors such as experimental samples and experimental operations, the actual dosage of the product may need to be adjusted according to actual conditions.

Inhibition and Inactivation

Inactivate at 60 °C for 10 min.Alternatively; Or adding EGTA (final concentration 20 mM) can inactivate the enzyme.

QC

Free of RNase and DNase activity.

Free of detectable DNA exonuclease and endonuclease.

No residual of host genomic DNA that would be detected by PCR.

The protein purity detected by SDS-PAGE is greater than 95%.

References

1. Skene PJ, et al. Targeted in situ genome-wide profiling with high efficiency for low cell numbers. Nature Protocols, 2018.
2. Hainer SJ, et al. Profiling of Pluripotency Factors in Single Cells and Early Embryos. Cell, 2019.
3. Meers MP, et al. Improved CUT&RUN chromatin profiling tools. Elife, 2019.