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Datasheet for KOA0886

Small Sample Targeted ChIP Kit

Overview

Description:	Small Sample Targeted ChIP Kit - KOA0886
Item No.:	KOA0886
Size:	1 Kit

Product Details

Background:	Association between proteins and DNA is a major mechanism in many vital cellular functions such as gene transcription and epigenetic silencing. It is crucial to understand these interactions and the mechanisms by which they control and guide gene regulation pathways and cellular proliferation. Chromatin immunoprecipitation (ChIP) is a technique to analyze the association of proteins with specific genomic regions in intact cells. ChIP can be used to study changes in epigenetic signatures, chromatin remodelling and transcription regulator recruitment to specific genomic sites. In ChIP, living cells are first fixed with a reversible crosslinking agent to stabilize protein-DNA interactions. The most widely used reagent to fix cells is formaldehyde which generates covalent bonds between amino or imino groups of proteins and nucleic acids. Formaldehyde treatment crosslinks both DNA-protein as well as protein-protein complexes. However conventional ChIP protocols require high numbers of cells (hundreds of thousands cells at least) limiting the application for ChIP technology to few cell samples. More recently, ChIP assays on smallest amount of cells have been reported. Nevertheless the procedure requires tedious optimization of several reaction conditions to face the increased background observed in ChIP performed with reduced amount of cells. That might consequently lead to considerable time and lab expenditures. To reduce these tedious steps, Small Sample Targeted ChIP Kit has optimized reagents and protocol to enable successful ChIP on as few as 10 000 cells. Moreover, the Small Sample Targeted ChIP Kit protocol has been thoroughly optimized for ChIP followed by high-throughput sequencing on Illumina® Next-Gen sequencers.
Synonyms:	ChIP assay, cross-linking, chromatin, Chromatin Immunoprecipitation, micro ChIP
Detection Kit Type:	ChIP Kit or Chromatin Immunoprecipitation Kit

Target Details

Relevant Links:	• KOA0886 protocol

Application Details

Application Note:	The different steps of the ChIP assay are cell fixation (crosslinking), chromatin shearing, immunoprecipitation, reverse crosslinking followed by DNA purification and analysis of the immunoprecipitated DNA. Suitable for 10 reactions.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ChIP:	User Optimized

Formulation

Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	See kit insert for components stored at 2-8°C and -20°C. Do not freeze Protein A and magnetic beads.
Expiration:	Expiration date is one (1) year from date of receipt.

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