

CUTANA™ Nuclei Extraction Buffer

Catalog No	21-1026	Pack Size	100 Reactions
Lot No	23249001-01	Applications	CUT&RUN, CUT&Tag

DESCRIPTION

CUTANA™ Nuclei Extraction Buffer is the essential reagent for harvesting nuclei from cultured cells and tissues for use in CUT&RUN and CUT&Tag assays. This buffer is expected to be broadly compatible with eukaryotic cells and tissues. Below are examples of various cells and tissue types that have undergone successful nuclei isolation using this buffer:

mouse NIH3T3 fibroblast cells	human A549 non-small cell lung cancer (NSCLC) cells
human K562 leukemia cells	human NCI-H1299 non-small cell lung cancer (NSCLS cells)
human bone marrow derived macrophages	human TIG-1 fetal lung cells
human monocyte derived macrophages	human LoVo colorectal cancer cells
human MV-4-11 macrophage cells	human LNCaP prostate carcinoma cells
human SUM149 triple negative breast cancer (TNBC) cells	human renal primary cells
human GM24385 B-lymphocyte (aka HG002) cells	human peripheral blood mononuclear cells (PBMCs)
human MCF7 breast cancer cells	human intestinal tissue
human MDA-MB-231 breast cancer cells	human HEPM embryonic cells
human SK-MEL-2 melanoma cells	

The reagent is prepared by supplementing Pre-Nuclei Extraction Buffer with protease inhibitor and spermidine fresh on the day of use. Utilize this buffer in EpiCypher's CUTANA™ Nuclei Extraction Protocol for CUT&RUN and CUT&Tag (epicypher.com/protocols) to obtain the highest quality nuclei for your genomic mapping assay.

CONTENTS

<u>Item</u>	<u>CAT</u>
CUTANA™ Pre-Nuclei Extraction Buffer	21-1026a
1 M Spermidine	21-1026b

REQUIRED MATERIALS NOT SUPPLIED

Protease inhibitor is not included. EpiCypher suggests using cOmplete™, EDTA-free Protease Inhibitor Cocktail (Roche 11873580001).

RECOMMENDED ACCESSORY PRODUCTS

<u>Item</u>	<u>CAT</u>
CUTANA™ CUT&RUN Kit	14-1048
CUTANA™ pAG-MNase	15-1016 / 15-1115
CUTANA™ pAG-Tn5	15-1017 / 15-1117

NOTE: CUTANA™ CUT&Tag Kit (14-1102 / 14-1103) already contains Nuclei Extraction Buffer

TECHNICAL INFORMATION

Storage	Store the Pre-Nuclei Extraction Buffer at 4°C and the 1 M Spermidine at -20°C. Components are stable for 6 months upon date of receipt.
Instructions for Use	<p>Prepare Nuclei Extraction Buffer FRESH on day of use as outlined below. This master mix includes 20% extra volume to account for pipetting error; no additional buffer volume is needed.</p> <p>Per CUT&RUN or CUT&Tag reaction, combine:</p> <p>235 µL Pre-Nuclei Extraction Buffer (21-1026a) 0.13 µL 1M Spermidine (21-1026b)* 9.8 µL 25X Protease Inhibitor (Roche, prepare by dissolving 1 tablet in 2 mL water)**</p> <p><i>*If preparing buffer for fewer than 8x reactions, dilute the 1M Spermidine stock 1:10 in molecular biology-grade water and add 1.3 µL per reaction.</i></p> <p><i>**Leftover 25X Protease Inhibitor can be stored for 12 weeks at -20°C</i></p> <p>Follow instructions detailed in EpiCypher's CUTANA™ Nuclei Extraction Protocol for CUT&RUN and CUT&Tag (epicypher.com/protocols) to isolate nuclei from suspension and adherent cells. The protocol includes key quality control checks to ensure nuclei are high quality before starting CUT&RUN or CUT&Tag.</p>

VALIDATION DATA

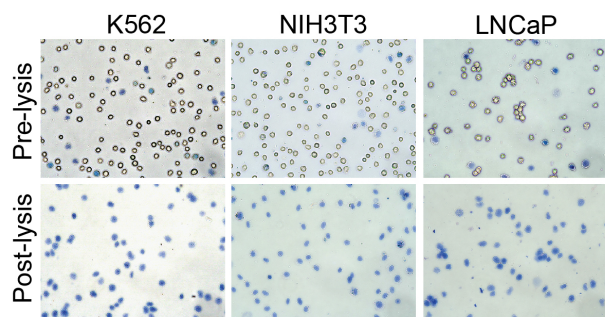


FIGURE 1 Nuclei Extraction. Nuclei were extracted from 3 different cell types: K562, NIH3T3, and LNCaP using the CUTANA™ Nuclei Extraction Protocol for CUT&RUN and CUT&Tag. Top 3 panels show cells before extraction. Starting cells are viable (bright white and round). Bottom 3 panels show nuclei extracted using the CUTANA™ Nuclei Extraction Buffer as indicated by positive Trypan Blue staining.