CUTANA™ Uncharged pAG-Tn5 for CUT&Tag

Catalog No	15-1025	**Species**	*E. coli*
Lot No	20142001-R1	**Source**	*E. coli*
Pack Size	20 µL	**Epitope Tag**	None
Concentration	5.5 µM (dimer)	**MW**	157 kDa (dimer)

DESCRIPTION

Products in EpiCypher's IDEA Toolbox (Innovation and Discovery of Epigenetic Applications) offer access to reagents without known or fully defined uses, enabling researchers to explore cutting-edge applications. Due to their novelty and unexplored potential, EpiCypher will engage in limited technical support.

CUTANA Uncharged pAG-Tn5 is a fusion of Proteins A and G to *E. coli* transposase (Tn5) and is the key enzyme for CUT&Tag [1]. This product is highly purified to remove contaminating *E. coli* DNA. For superior normalization, as well as antibody validation and reaction monitoring, SNAP-CUTANA™ nucleosome spike-ins (e.g. EpiCypher 19-1002) are recommended. **This Tn5 is uncharged and must be loaded with user-designed mosaic adapter DNA prior to use in CUT&Tag.** The uncharged protein exists as a monomer but will dimerize when charged with DNA. For a charged enzyme that is ready to use, see EpiCypher 15-1017.

RECOMMENDED ACCESSORY REAGENTS

Item	CAT	Item	CAT
Anti-Rabbit Secondary Antibody	13-0047	H3K4me3 Positive Ctrl Antibody	13-0041
Anti-Mouse Secondary Antibody	13-0048	Rabbit IgG Negative Ctrl Antibody	13-0042
Magnetic Separation Rack, 0.2 mL	10-0008	CUTANA™ ConA Beads	21-1401
Magnetic Separation Rack, 1.5 mL	10-0012	SNAP-CUTANA™ K-MetStat	19-1002
CUT&RUN 8-strip Tubes	10-0009	Non-HS 2X PCR Master Mix	15-1018

TECHNICAL INFORMATION

Storage	Stable for one year at -20°C from date of receipt. The protein is not subject to freeze/thaw under these conditions.
Formulation	50 mM HEPES-KOH pH 7.2, 100 mM NaCl, 0.1 mM EDTA, 1 mM DTT, 0.1% Triton X-100, 50% glycerol

APPLICATION NOTES

pAG-Tn5 transposomes can be assembled as previously described [1]. In brief, 3.2 µL of an equimolar mixture of pre-annealed user-defined Adapter-A and user-defined Adapter-B oligonucleotides (50 µM each, 100 µM total adapter DNA) should be mixed with 20 µL of 5.5 µM pAG-Tn5 fusion protein dimer (a 3:1 molar ratio of adapter DNA to pAG-Tn5 dimer). The mixture is then incubated on a rotating platform for 1 hour at room temperature and stored at -20°C. Specific activity definition of the charged pAG-Tn5 is highly recommended before use in CUT&Tag. **Due to the confounding variable of user-supplied mosaic adapters, EpiCypher will not engage in protocol troubleshooting for this reagent.** For a pre-charged enzyme that is eligible for technical support, see EpiCypher 15-1017.

REFERENCES

[1] Kaya-Okur et al. *Nat. Commun.* (2019). PMID: 31036827

VALIDATION DATA

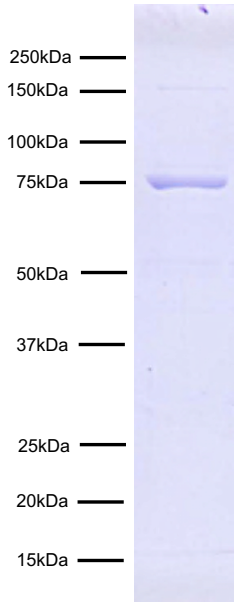

FIGURE 1 Protein gel data. CUTANA pAG-Tn5, Uncharged (1 µg) was resolved via SDS-PAGE and stained with Coomassie blue. The migration and molecular weight of the protein standards are indicated.