True story:

TrueCut Cas9 proteins deliver maximum CRISPR performance

Achieve your research goals with next-generation Cas9 proteins

Invitrogen™ and Gibco™ TrueCut™ Cas9 proteins are designed to deliver consistently higher editing efficiency across a wide range of gene targets and cell types. We now offer four versions of our leading Cas9 protein to better meet your genome editing goals.

	Invitrogen™ TrueCut™ Cas9 Protein v2	Invitrogen™ TrueCut™ HiFi Cas9 Protein	Gibco™ CTS™ TrueCut™ Cas9 Protein	Gibco™ CTS™ HiFi Cas9 Protein
Description:	A next-generation wild type Cas9 protein designed to deliver maximum editing efficiency	A high-fidelity Cas9 designed to improve specificity by significantly reducing off-target effects	A GMP-manufactured wild type Cas9 protein designed to deliver maximum CRISPR editing efficiency at a larger scale	A GMP-manufactured, high-fidelity Cas9 protein designed to significantly reduce off-target events while maintaining high editing efficiency
Intended for:	Most common research applications	Experiments that are sensitive to off-target effects	Clinical research requiring the highest editing efficiency	Clinical research requiring minimal off-target effects
Key benefits:	• **Exceptional editing efficiency**—consistently high on-target editing efficiency in all tested cell lines, including standard, primary, stem, and immune (>90% editing in T cells) • **Excellent performance**—up to 2x higher editing efficiency in difficult targets compared to the competition • **High quality**—manufactured under strict ISO 13485 quality standards	• **Increased specificity**—significantly reduced off-target effects in a broad range of cell types, including primary, stem, and immune cells • **High editing efficiency**—maintains the high on-target editing efficiency of TrueCut Cas9 Protein v2 • **High quality**—manufactured under strict ISO 13485 quality standards	• **Exceptional performance**—consistently high editing efficiency in all tested cell lines (>90% editing in T cells) • **Higher stringency manufacturing**—manufactured in compliance with standards for *Ancillary Materials for Cell, Gene, and Tissue-Based Products* including USP <1043>; Ph.Eur. 5.2.12, and ISO 20399 following the principles of 21 CFR Part 820 in an FDA-registered manufacturing site • **Extensive safety testing**—including sterility, endotoxin, mycoplasma, residual host nucleic acids, and proteins	• **Significantly reduced off-target effects in a broad range of cell types**—>90% reduction in T cells • **Equivalent editing efficiency**—maintains the same high editing efficiency as CTS TrueCut Cas9 Protein • **Improved knock-in efficiency**—also offered as a kit with Gibco™ CTS™ Xenon Genome Editing Buffer for 2x the knock-in efficiency

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Evaluate the performance with these application notes:

Application note	Featured Cas9 protein
Achieve functional knockout in up to 90% of human primary T cells	TrueCut Cas9 Protein v2
Achieve high specificity and on-target efficiency with TrueCut HiFi Cas9 Protein	TrueCut HiFi Cas9 Protein
How to monitor and minimize off-target events during genome editing	TrueCut HiFi Cas9 Protein
Advancing CAR T cell therapy with CTS TrueCut Cas9 Protein	CTS TrueCut Cas9 Protein
Analysis of the performance of GMP-manufactured Cas9 nucleases for cell therapy applications	CTS TrueCut Cas9 Protein
Gene modification for cell therapy applications	CTS TrueCut Cas9 Protein
Exceptional editing specificity for therapeutics applications with CTS HiFi Cas9 Protein	CTS HiFi Cas9 Protein

Ordering information

Description	Quantity	Concentration	Cat. No.
TrueCut Cas9 Protein v2	10 µg	1 mg/mL	A36496
	25 µg	1 mg/mL	A36497
	100 µg	5 mg/mL	A36498
	500 µg	5 mg/mL	A36499
TrueCut HiFi Cas9 Protein	10 µg	1 mg/mL	A50574
	25 µg	1 mg/mL	A50575
	100 µg	5 mg/mL	A50576
	500 µg	5 mg/mL	A50577
CTS TrueCut Cas9 Protein	2.5 mg	10 mg/mL	A45220
	5.0 mg	10 mg/mL	A45221
CTS HiFi Cas9 Protein	2.5 mg	10 µg/µL	A54223
	5.0 mg	10 µg/µL	A54224
CTS HiFi Cas9 Protein and CTS Xenon Genome Editing Buffer Kit	2.5 mg (Cas9), 1 x 100 mL (Buffer)	10 µg/µL	A54285
	5 mg (Cas9), 2 x 100 mL (Buffer)	10 µg/µL	A54287

Find out more at **thermofisher.com/cas9proteins**