

Store at  
-20C  
#73211

# Cas9 and Associated Proteins Antibody Sampler Kit



Orders: 877-616-CELL (2355)  
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com  
cellsignal.com

1 Kit (4 x 20 microliters)

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

**For Research Use Only. Not for Use in Diagnostic Procedures.**

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Cas9 ( <i>S. pyogenes</i> ) (D8Y4K) Rabbit mAb	65832	20 µl	150 kDa	Rabbit IgG
Cas9 ( <i>S. aureus</i> ) (E4G3U) Rabbit mAb	51610	20 µl	124 kDa	Rabbit IgG
AsCpf1/Cas12a (Strain <i>BV3L6</i> ) (E1U7C) Rabbit mAb	19984	20 µl	151 kDa	Rabbit IgG
FnCpf1/Cas12a (Strain <i>U112</i> ) (E7I2B) Rabbit mAb	90111	20 µl	152 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

Please visit [cellsignal.com](http://cellsignal.com) for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

## Description

The Cas9 and Associated Proteins Antibody Sampler Kit provides an economical means of detecting Cas9 and Cas9-related family members. The kit includes enough antibody to perform two western blot experiments with each primary antibody.

## Storage

Monoclonal antibodies are supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibodies.

## Background

CRISPR-Cas (clustered regularly interspaced short palindromic repeats and CRISPR-associated proteins) are RNA-guided nuclease effectors that are utilized for precise genome editing in mammalian systems (1). Class 2 CRISPR systems rely on single-component effector proteins to mediate DNA interference (2). Several Class 2 CRISPR effector proteins, derived from specific bacterial species, are used for genome editing. Cas9 family of proteins, derived from *S. pyogenes* and *S. aureus*, are some of the most well characterized and widely used editing effector enzymes. Additional members of the Class2 CRISPR system include Cpf1/Cas12a (CRISPR from *Prevotella* and *Francisella*) endonucleases (3). Cpf1/Cas12a endonucleases, compared to Cas9 systems, have several unique features that increase the utility of CRISPR-based genome editing techniques: 1) Cpf1/Cas12a-mediated cleavage relies on a single and short CRISPR RNA (crRNA) without the requirement of a trans-activating crRNA (tracrRNA), 2) Cpf1/Cas12a utilizes T-Rich protospacer adjacent motif (PAM) sequences rather than a G-Rich PAM, and 3) Cpf1/Cas12a generates a staggered, rather than a blunt-ended, DNA double-stranded break (3). These features broaden the utility of using CRISPR-Cas systems for specific gene regulation and therapeutic applications. Several Cpf1/Cas12a bacterial orthologs, e.g. *Francisella novicida* *U112* and *Acidaminococcus sp. BV3L6*, have been characterized for CRISPR-mediated mammalian genome editing (3,4).

## Background References

1. Cong, L. et al. (2013) *Science* 339, 819-23.
2. Horvath, P. and Barrangou, R. (2010) *Science* 327, 167-70.
3. Zetsche, B. et al. (2015) *Cell* 163, 759-71.
4. Zhang, Y. et al. (2017) *Sci Adv* 3, e1602814.

## Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit [cellsignal.com/trademarks](http://cellsignal.com/trademarks) for more information.

## Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for

diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.