Recombinant Leptotrichia wadeii Cas13a Protein

Cat. No. Cas13a-01L **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Leptotrichia wadeii Cas13a Protein (1182aa) highly purified with no detectable RNAse and DNAse activity without tag was expressed in E. coli.
Species	Leptotrichia wadei
Source	E.coli
Description	Adaptive immune systems from prokaryotes utilize clustered regularly interspaced short palindromic repeats (CRISPRs) and CRISPR associated (Cas) proteins to cleave foreign genetic material. Cas13a, (previously referred to as C2c2) is part of the Type VI CRISPR-Cas system. Cas13a functions similarly to Cas9, using a ~64-nt guide RNA to encode target specificity. The Cas13a protein complexes with the guide RNA via recognition of a short hairpin in the crRNA, and target specificity is encoded by a 28 30-nt spacer that is complementary to the target region. Cas13a cuts within the crRNA direct repeat in a pre-crRNA array to produce a mature Cas13a-crRNA complex. In addition to programmable RNase activity, all Cas13s exhibit collateral activity after recognition and cleavage of a target transcript, leading to non-specific degradation of any nearby transcripts regardless of complementarity to the spacer. The RNA-activated RNA cleavage activity of Cas13a allows for RNA detection and potential diagnostic applications. Catalytically inactive versions of Cas13 may also be useful as programmable RNA binding proteins to regulate or image specific transcripts.
Molecular Mass	143.7 kDa

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Purity	> 95 % as determined by SDS-PAGE
Applications	Targeted RNA knockdown; RNA editing; Nucleic acid detection
Stability	Avoid repeated freeze-thaw cycles.
Storage	At -80 centigarde.
Storage Buffer	Cas13a Storage Buffer: 0.3 M NaCl, 20 mM Tris-HCl, pH 8.0, 0.5 mM EDTA, 1 mM DTT, 50% Glycerol 10 X Cas13a Reaction Buffer: 200 mM HEPES, pH 6.8, 90 mM MgCl2

GENE INFORMATION

Official Symbol	Cas13a
Synonyms	CRISPR-associated endoribonuclease Cas13a; Cas13a
UniProt ID	U2PSH1

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