Alt-R™ CRISPR reagent stability

IDT has tested the stability of the Alt-R CRISPR reagents, including Cas nucleases, guide RNAs (gRNAs), and HDR enhancer. In addition, IDT has specifically tested the stability of ribonucleoproteins (RNPs), i.e., Cas nucleases in complex with gRNA. All of the tested reagents demonstrated high stability under a wide range of storage conditions as summarized here.

		Storage temperature			
		−80°C	–20°C	4°C	23°C
Alt-R CRISPR nucleases	Cas9 V3Cas12a V3HiFi Cas9	Stable up to 2 years in stock storage buffer	Stable up to 2 years in stock storage buffer	Stable up to 2 months in stock storage buffer	Stable up to 3 days in stock storage buffer
	Cas12a UltraCas9 D10A Nickase	Stable up to 1 year in stock storage buffer	Stable up to 1 year in stock storage buffer		
Alt-R CRISPR ribonucleoprotein complexes	• Cas12a V3 complexed with Alt-R CRISPR-Cas12a crRNA	Stable up to 2 years	Stable up to 2 years		
	 Cas9 V3 complexed with 2-part guide RNA, made of Alt-R CRISPR-Cas9 crRNA plus Alt-R CRISPR-Cas9 tracrRNA Cas12a Ultra complexed with Alt-R CRISPR-Cas12a 	Stable up to 1 year	Stable up to 1 year	Stable up to 2 months	Stable up to 3 days
	crRNA				
Alt-R CRISPR guide RNAs	• CRISPR-Cas9 sgRNA	Stable up to 18 months: • lyophilized or • hydrated in Nuclease-Free Water or IDTE pH 7.5	Stable up to 18 months: • lyophilized or • hydrated in Nuclease-Free Water or IDTE pH 7.5	• Stable up to 18 months hydrated in Nuclease-Free Water or IDTE pH 7.5	• Stable up to 18 months hydrated in Nuclease-Free Water or IDTE pH 7.5
				Lyophilized: long-term storage not recommended	Lyophilized: long-term storage not recommended
	CRISPR-Cas9 crRNACRISPR-Cas9 crRNA XT	Stable up to 1 year: • lyophilized or • hydrated in Nuclease-Free Water or IDTE pH 7.5	Stable up to 1 year: • lyophilized or • hydrated in Nuclease-Free Water or IDTE pH 7.5	 Stable up to 1 year hydrated in Nuclease-Free Water or IDTE pH 7.5 Lyophilized: long-term storage not recommended 	 Stable up to 1 year hydrated in Nuclease-Free Water or IDTE pH 7.5 Lyophilized: long-term storage not recommended
	CRISPR-Cas9 tracrRNA		Stable up to 2 years: • lyophilized or • hydrated in Nuclease-Free Water or IDTE pH 7.5	Stable up to 2 years: • lyophilized or • hydrated in Nuclease-Free Water or IDTE pH 7.5	 Stable up to 1 year hydrated in Nuclease-Free Water or IDTE pH 7.5 (not tested beyond 1 year) Stable up to 2 years lyophilized
	Labeled tracrRNA, ATTO™ 550		Stable up to 2 years: • lyophilized or • hydrated in Nuclease-Free Water or IDTE pH 7.5	 Stable up to 6 months hydrated in Nuclease-Free Water or IDTE pH 7.5 Stable lyophilized up to 18 months 	 Stable up to 6 months hydrated in Nuclease-Free Water or IDTE pH 7.5 Stable lyophilized up to 18 months
	gRNA 2-part complex, made of CRISPR-Cas9 crRNA plus CRISPR-Cas9 tracrRNA		Stable up to 2 years in IDTE pH 7.5	Stable up to 6 months in IDTE pH 7.5	
Alt-R CRISPR enhancing reagents	HDR Enhancer	Stable up to 1 year stored at stock concentration	Stable up to 1 year stored at stock concentration	Stable up to 1 year stored at stock concentration	Stable up to 1 year stored at stock concentration

