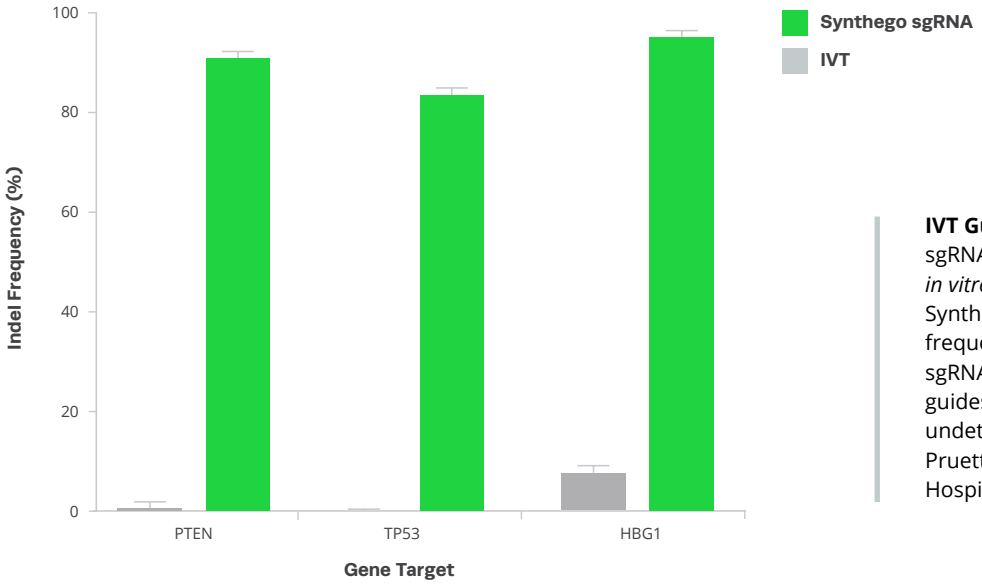
SYNTHETIC sgRNA

The Best CRISPR Editing in Any Cell Type

CRISPR experts agree that using synthetic single guide RNAs (sgRNAs) for gene editing generate more efficient and consistent editing results than any other type of guide RNAs. Synthego sgRNAs are highly pure guides that deliver indel frequencies of up to 97%, making it easy to efficiently edit virtually any cell type. Our sgRNAs can be ordered with site-specific chemical modifications to provide greater stability and decreased activation of the cellular innate immune response, resulting in superior editing in essentially every experiment.

Synthego sgRNA Delivers Robust and Reliable CRISPR Editing

Chemically modified synthetic sgRNAs from Synthego produce the highest indel frequencies and lead to reproducible CRISPR editing between experimental replicates, as well as a decrease in off-target effects. IVT guides do not deliver the consistent results you deserve.



IVT Guides are Less Efficient.
sgRNA sequences were either generated by *in vitro* transcription (IVT) or synthesized by Synthego as chemically modified sgRNAs. Indel frequency from experiments using Synthego sgRNA was always >90%, while editing by the IVT guides was always less than 10% and sometimes undetectable. Data courtesy of Shondra Pruett-Miller, Ph.D., St. Jude Children's Research Hospital.

Avoid Editing Remorse with CRISPR sgRNA.

Highest Indel Frequencies
The best CRISPR editing possible in all cell types.

Best Reproducibility
Extremely pure synthetic gRNA synthesis leads to unparalleled editing consistency.

Fast and Easy
No annealing or purification steps required.

CRISPRevolution Synthetic RNA vs. Plasmid and IVT

	Synthetic RNA	Plasmid	IVT
Guide Creation Process	1. Select target sequence 2. Order synthetic RNA	1. Select target sequence 2. Design/order DNA primers 3. PCR guide into plasmid 4. Transform into cells 5. Screen cells 6. Sequence verify plasmid 7. Purify plasmid DNA	1. Select target sequence 2. Design/order DNA primers 3. Assemble guide by PCR 4. Perform IVT 5. Purify guide RNA
Time to Transfection	Ready on arrival	1-2 weeks	1-3 days
Labor Time in Lab	Minutes	Days of lab work	Full day of lab work
Editing Efficiency	Up to 97%	Medium to high	Variable
Guide Quality	Very high	Variable; depends on preparation	Low; known for impurities and inconsistency
Primary & Stem Cell Efficiency	Very high	Inefficient	Inefficient
Off-target Effects	Very low	Variable; possibility of DNA integration into host genome	Variable; possibilty of IVT enzyme errors in target sequence

Don't Settle for Less Than Synthetic sgRNAs in Your CRISPR Experiments.

Available on the scale that fits your needs: 1.5 to 500+ nmol.

Synthego.com/contact

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SYNTHEGO

Synthego's Full Stack Genome Engineering portfolio includes design and analysis software, synthetic RNA kits and gene editing services for CRISPR-based research. Our vision is to bring precision and automation to genome engineering, enabling rapid and cost-effective research with consistent results for every scientist.