biotechrabbit
leap and lead

Molecular biology

Enzymes, Proteins and Reagents

Custom Services and Solutions
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About biotechrabbit

biotechrabbit innovates, develops and manufactures molecular biology products with superior performance for diagnostics, life science research and applied markets. All development, production and logistics take place in our Berlin facility.

Molecular biology enzyme and protein production is the cornerstone of biotechrabbit's offering. We use high density prokaryotic and eukaryotic fermentation followed by several fine-tuned purification steps to deliver highly pure proteins. Capacities range from small to large-scale production.

The research and development department with experienced scientists and business developers is emphasizing on customers and partners' needs. The team is highly engaged in providing top-quality products for molecular biology applications.

ISO 13485:2016 and ISO 9001:2015 certification exemplify biotechrabbit's commitment to the highest quality standards. The scope of our quality management includes: design and development, production, marketing and distribution of molecular biology products, proteins and reagents for in-vitro diagnostics.

Certified
Quality-System
mdc
ISO 13485
ISO 9001

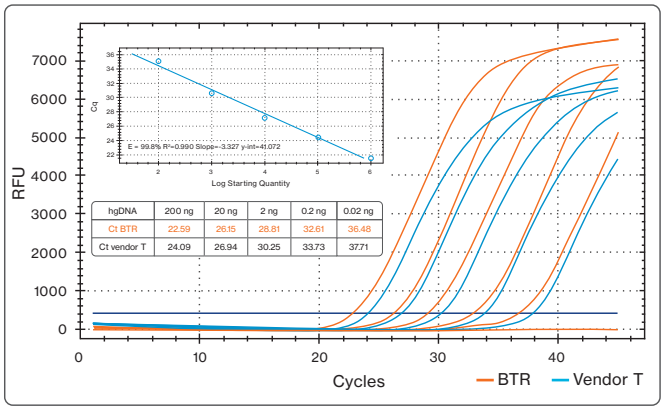
Quality control analyses after each key production step secure product performance. Sophisticated activity analysis in conjunction with purity, concentration and contamination tests confirm the consistently high quality of all biotechrabbit products.

Lyophilization as a potential final processing step fulfills the continually growing demand for product stability without depending on a temperature-controlled supply chain. Developed for low hygroscopicity combined with high rigidity, biotechrabbit lyo cakes and beads perfectly match all stability and performance requirements.

CAPITAL qPCR™ Probe Mix

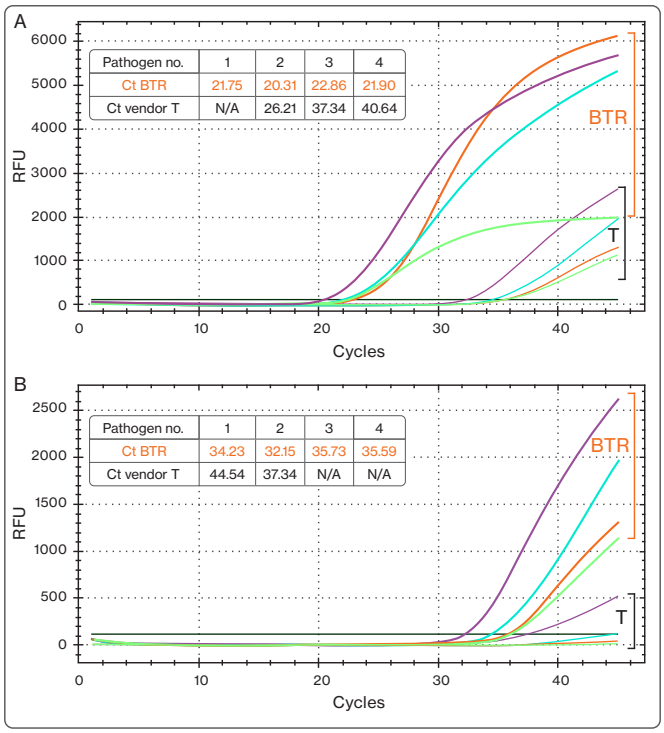
- Best in-class performance for both single- and multiplex targets
- Convenient master mix with high specificity in pathogen detection
- Highly sensitive for low-abundance DNA targets

biotechrabbit CAPITAL qPCR Probe Mix for quantifying genomic, cDNA and viral sequences provides outstanding performance in single and multiplex qPCR. The high sensitivity provided by the mix is ideal for detection of low-abundance DNA targets in applications, such as pathogen detection.



▲ Accurate quantification over a wide linear range. A qPCR assay was performed to evaluate the sensitivity, specificity and absence of non-specific amplification in non-template controls. Human genomic DNA was diluted (200 ng to 0.02 ng) and amplified using the CAPITAL qPCR Probe Mix and a mix from Vendor T.

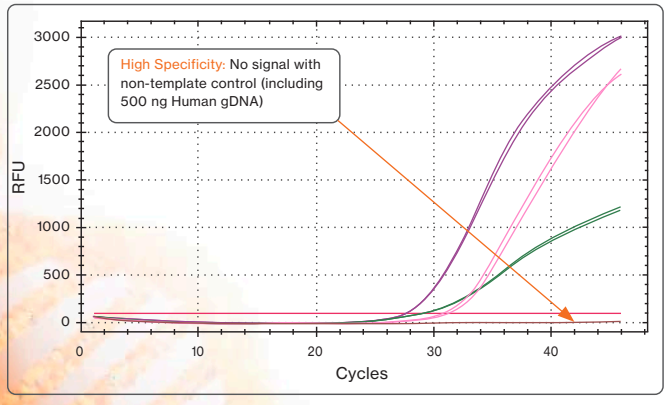
▶ High sensitivity for pathogen detection in multiplex assays. A 4-plex qPCR assay for detecting human pathogens was performed using CAPITAL qPCR Probe Mix and a mix from Vendor T. The biotechrabbit mix demonstrated reliable and sensitive detection with both high- and low-abundance templates (panels A and B, respectively).



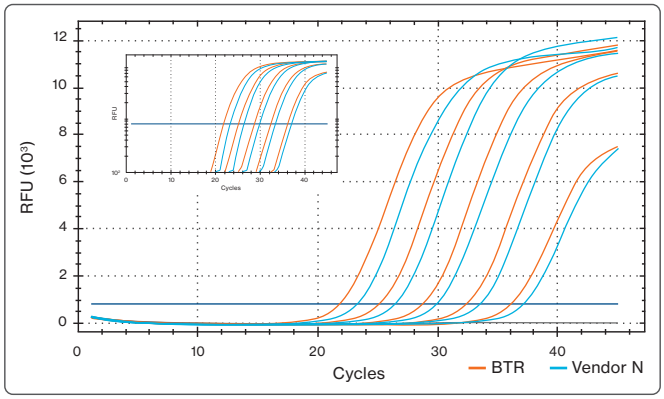
CAPITAL qRT-PCR™ Probe Mix

- Best in-class performance for single and multiplex reactions
- Convenient master mix for detection of low-copy pathogen targets
- High specificity and sensitivity across a wide range of sample sources

biotechrabbit CAPITAL qRT-PCR Probe Mix provides outstanding performance for real-time PCR quantification of RNA templates, including mRNA, total RNA and viral RNA from a wide range of targets. The proprietary master mix ensures high specificity and sensitivity with one or more targets, making it the choice for extremely low-copy-number targets in pathogen detection.



Superb multiplexing performance: high sensitivity and specificity. CAPITAL qRT-PCR Probe Mix was used to perform 3-plex, one-step qPCR for detecting duplications of three different viral RNA targets. The mix performed with high specificity and excellent accuracy in multiplex detection.

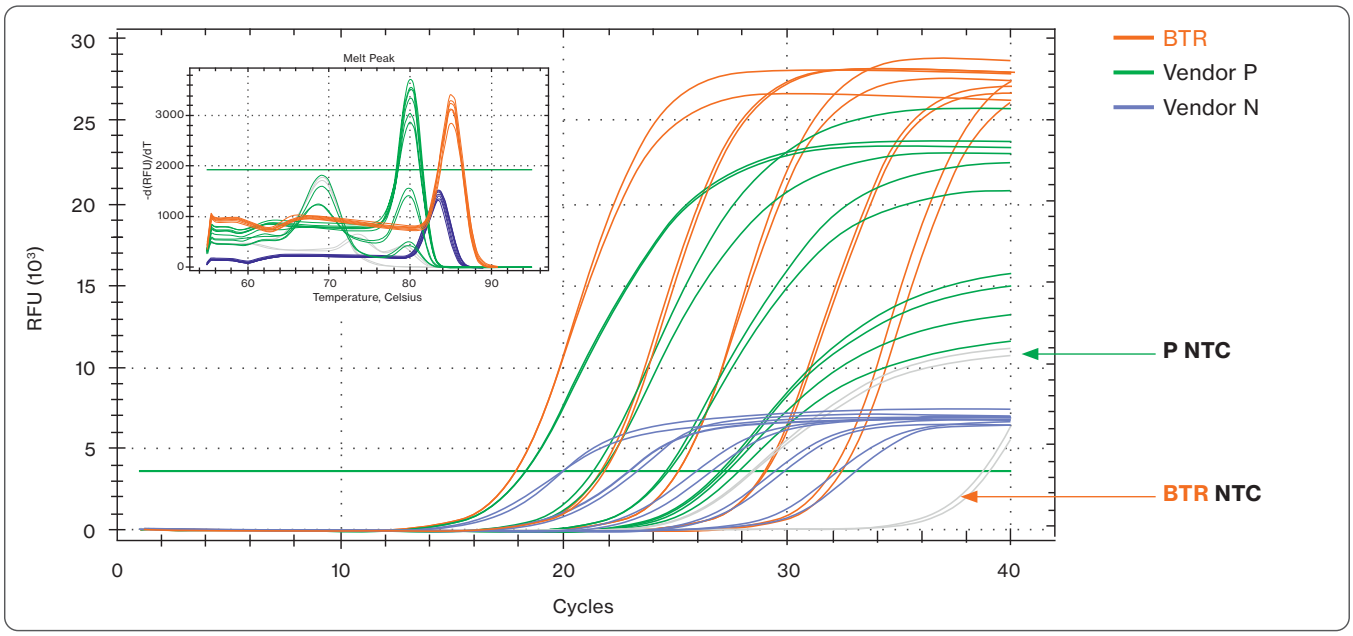


Sensitive and robust RT-qPCR. A one-step RT-qPCR assay was performed to evaluate low-input detection, specificity and absence of non-specific amplification in non-template control. RT-qPCR targets were quantitated with 10 ng to 1 pg total RNA targeting GAPDH. biotechrabbit CAPITAL qRT-PCR Probe mix showed earlier Ct in all dilutions compared to vendor N.

CAPITAL qRT-PCR™ Green Mix

- Convenient mix for quantification of RNA templates
- Sensitive and specific amplification
- Excellent linearity across a wide range of RNA dilution

biotechrabbit CAPITAL qRT-PCR Green Mix allows sensitive and specific cDNA synthesis and qPCR in a single tube for quantifying mRNA, total RNA and viral RNA sequences. Extremely low-copy-number targets can be detected with high efficiency over several logs of template concentration. The proprietary CAPITAL qRT-PCR Green technology is provided as a convenient master mix.

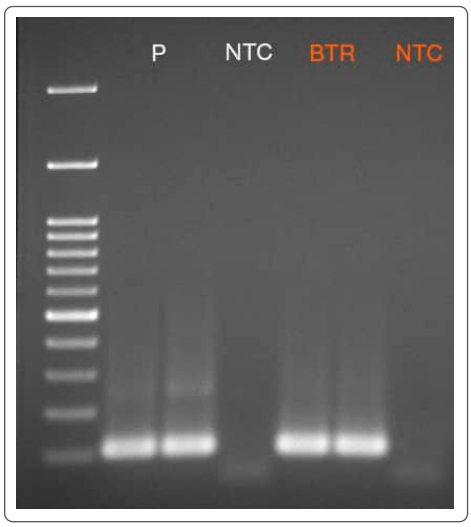


Superb sensitivity and specificity in RNA quantification. One step RT-qPCR was performed with a serial dilution of human total RNA (10 ng to 1 pg per reaction) to evaluate the CAPITAL qRT-PCR Green Mix and commercially available dye-based QRT-PCR reagents. The biotechrabbit mix exhibited robust amplification with high specificity, earlier Ct and higher signal than the mixes from two other vendors.

One Step RT-PCR Mix

- Fast and convenient endpoint PCR assay setup
- High yield of amplification
- Highly specific detection

biotechrabbit One Step RT-PCR Mix provides fast and convenient setup for reverse transcription and amplification in a single step. The blend of efficient thermostable reverse transcriptase and proprietary Ribonuclease Inhibitor ensures high cDNA yields. The optimized composition allows highly specific detection, even of complex templates.

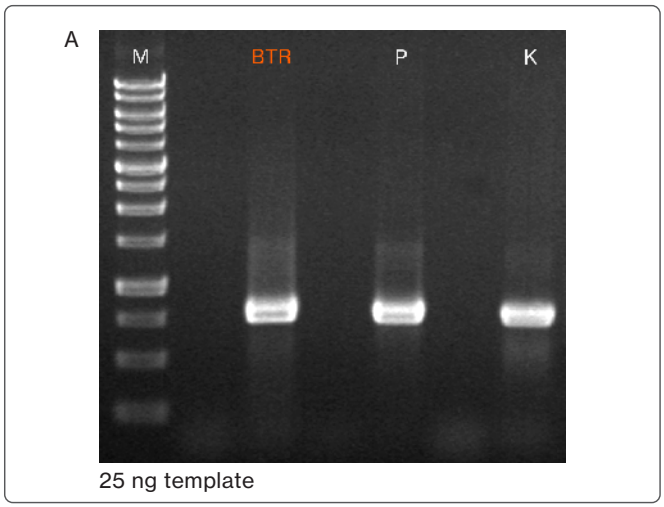


High-yield amplification. cDNA was synthesized from 500 ng human total RNA in a 50 µl reaction at 50 °C and subjected to 40 cycles of amplification of a 111 bp product using the One Step RT-PCR Mix and a kit from Vendor P. The biotechrabbit mix produced high yields and exhibited no amplification of side products, illustrating its high specificity. NTC: no template control.

Direct-Load Hot Start PCR Mix

- Room-temperature reaction setup and direct gel loading
- High specificity and sensitivity
- Amplification of low abundance targets with high yield

biotechrabbit Direct-Load Hot Start PCR Mix contains tracking dyes and allow reactions to be loaded directly into agarose gels without the addition of loading buffer. The hot-start mix provides room-temperature reaction setup and highly specific and sensitive amplification for high yields even with low-abundance targets.

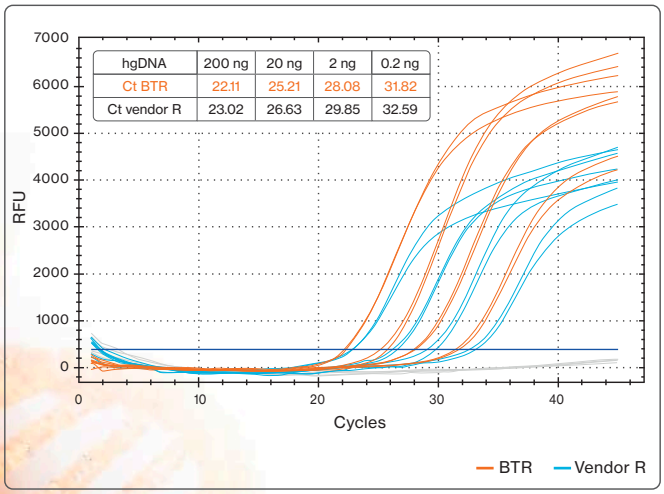


High-yield amplification of a low-abundance target. A 750 bp target was amplified from dilutions of human genomic DNA (per reaction: 25 ng, Panel A; 2.5 ng, Panel B) and loaded directly onto an agarose gel along with a 1 kb ladder (M). The biotechrabbit mix produced higher yields, especially at low template concentrations, compared to mixes from Vendors P and K.

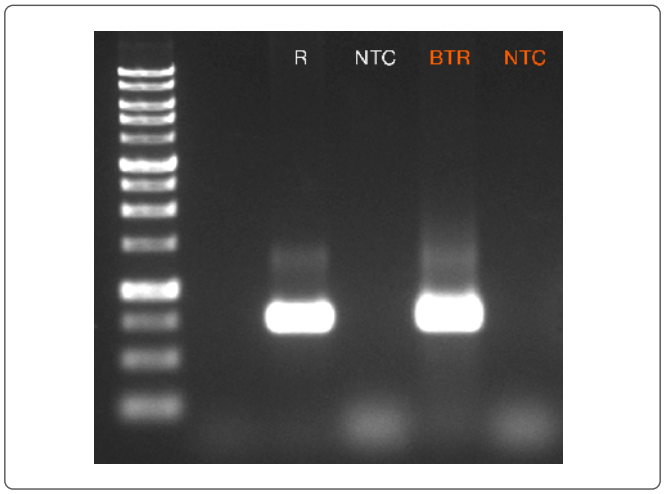
ApStarTaq™ DNA Polymerase

- Instant enzyme activation
- High sensitivity, specificity and yield in real-time and endpoint PCR
- Convenient for room temperature assay setup

biotechrabbit ApStarTaq DNA Polymerase is an aptamer-based hot-start enzyme that ensures high amplification yields for real-time and endpoint PCR. Convenient room-temperature setup is provided by an aptamer which inhibits *Taq* DNA Polymerase at ambient temperatures. Activity is instantly restored at 45°C for highly sensitive and specific amplification.



Superior results with high-sensitivity qPCR amplification. Human genomic DNA was diluted (200 ng to 0.2 ng per reaction) and amplified using ApStarTaq DNA Polymerase and an aptamer *Taq* polymerase from Vendor R to evaluate sensitivity and specificity. Results demonstrate distinctly earlier Ct values and higher signal of detection for the biotechrabbit polymerase.

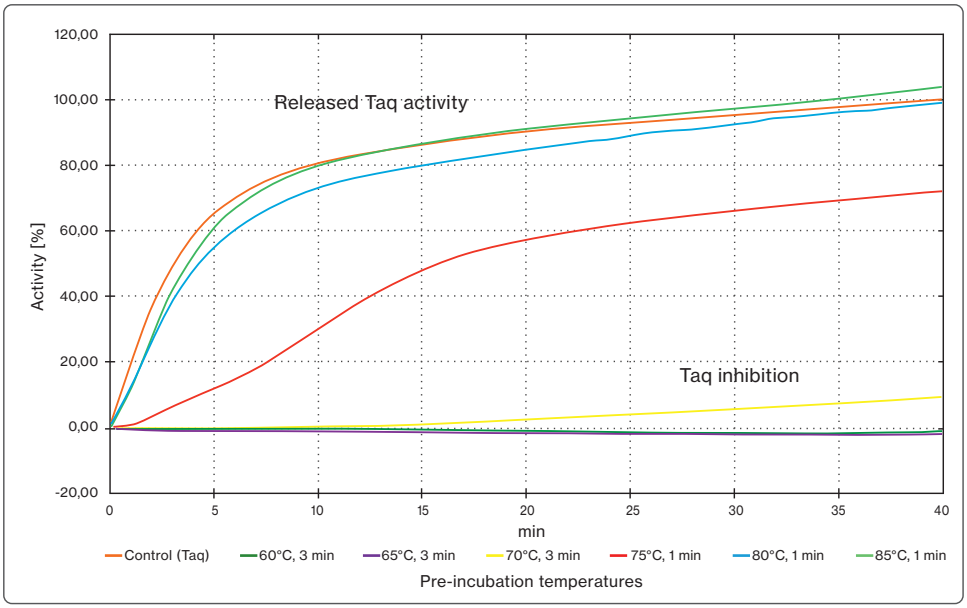


Maximum application convenience with high yield and specificity. A 750 bp target was amplified from 2.5 ng human genomic DNA to assess the yield and specificity using ApStarTaq DNA Polymerase and a polymerase from Vendor R. Higher yield was obtained using the biotechrabbit polymerase. NTC: no template control.

UPstart™ Anti-Taq Antibody

- Efficient *Taq* DNA Polymerase inhibition and defined release at elevated temperature
- Increased target yield and specificity with reduced non-specific amplification
- Exceptionally pure monoclonal antibody produced in cell culture

biotechrabbit UPstart Anti-Taq Antibody is an ultra-pure monoclonal antibody providing highly efficient hot-start for PCR, enhancing specificity and sensitivity and improving yields. The antibody binds to *Taq* DNA polymerase, efficiently preventing amplification before the first denaturation step. At high temperatures, the antibody becomes inactive and releases active *Taq* DNA polymerase.

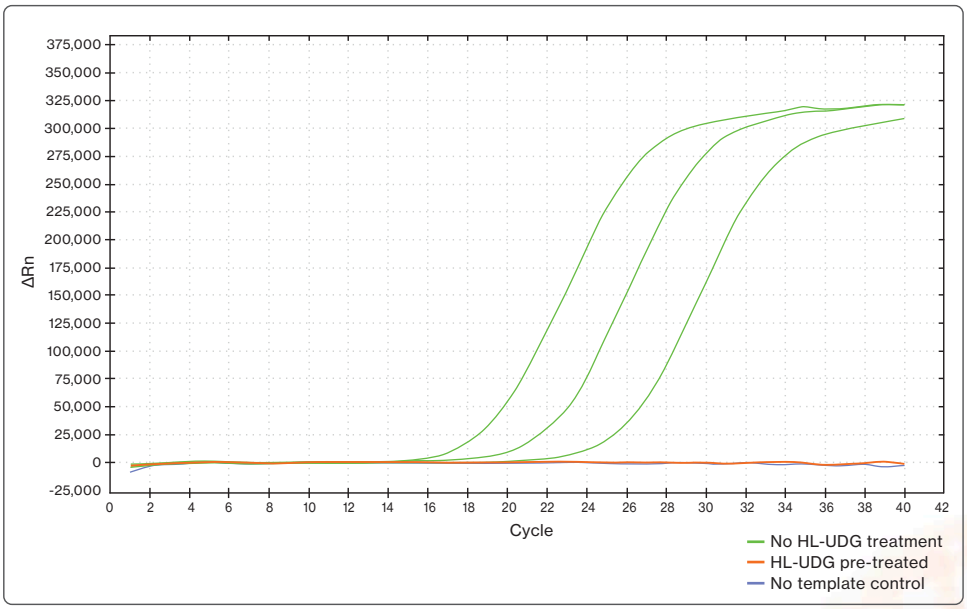


Efficient temperature-dependent inhibition of *Taq* DNA Polymerase. Amplification reactions were pre-incubated with UPstart Anti-Taq Antibody at different temperatures, followed by an isothermal polymerase assay. *Taq* activity was inhibited up to 70°C and restored after pre-incubation at elevated temperatures.

Heat-Labile Uracil–DNA Glycosylase

- Extremely beneficial in qPCR and RT-qPCR
- Inactive at 50°C, entirely inactivated by heating to 80°C
- Highly purified enzyme free of RNases and DNases

biotechrabbit Heat-Labile Uracil–DNA Glycosylase improves qPCR and RT-qPCR performance by selectively degrading carryover contamination with DNA amplification products. The enzyme degrades uracil-containing DNA as initial step before running reverse transcription or PCR amplification. Efficient heat inactivation of this highly pure, RNase- and DNase-free enzyme ensures all target DNA/RNA or PCR product remain intact.



Efficient removal of PCR carryover contamination. An uracil-containing PCR product was used as template (100 ng, 10 ng and 1 ng per reaction) and subjected to qPCR with and without Heat-Labile Uracil–DNA Glycosylase treatment. Amplification at all DNA concentrations is a result of the simulated carryover contamination. The lack of amplification in HL-UDG treated reactions indicates that carryover DNA was successfully removed.

biotechrabbit product portfolio

Real-time PCR

CAPITAL qPCR™ Probe Mix
CAPITAL qPCR™ Green Mix
CAPITAL qRT-PCR™ Probe Mix
CAPITAL qRT-PCR™ Green Mix

DNA Polymerases and Master Mixes

Taq / Hot Start *Taq* DNA Polymerase and PCR Mixes
ApStarTaq™ DNA Polymerase
Direct-Load Hot Start PCR Mix
HiFi DNA Polymerase
Long Range Hot Start PCR Mix

Reverse Transcription

Reverse Transcriptase
One Step RT-PCR Mix
cDNA Synthesis Kit

Enzymes and proteins

UPstart™ Anti-Taq Antibody
T7 RNA Polymerase
T4 DNA Ligase
Heat-Labile Uracil–DNA Glycosylase
Proteinase K
RNase Inhibitor

More product lines

Lyophilized Polymerases and Mixes
Nucleotide Sets and Mixes
GenUP™ Nucleic Acid Purification Kits
DNA/Protein Electrophoresis Ladders
Cell-free Protein Synthesis Kits (RTS)
Tris-NTA Amine / Biotin (High affinity His-tag binding)

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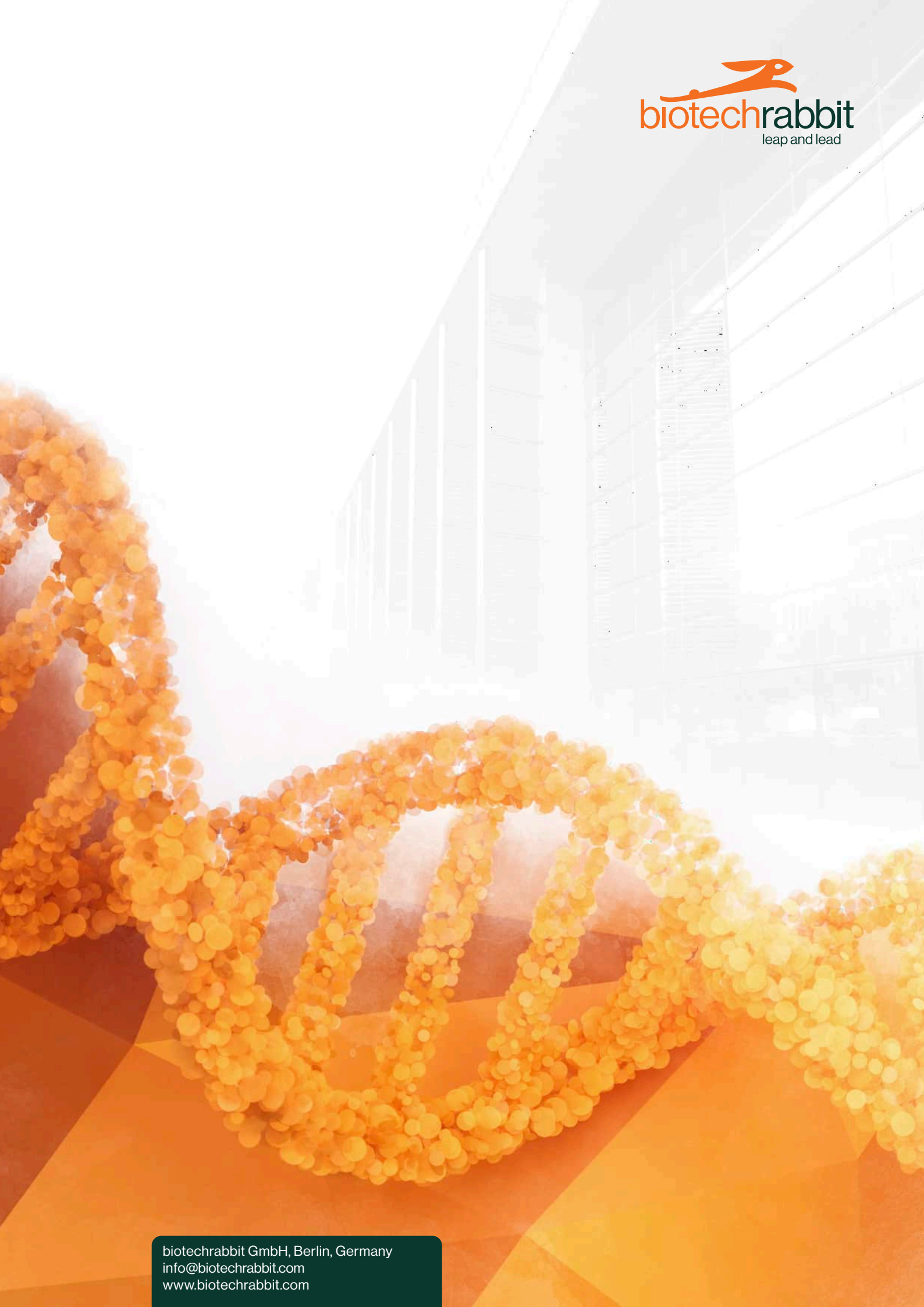

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