



YEASEN

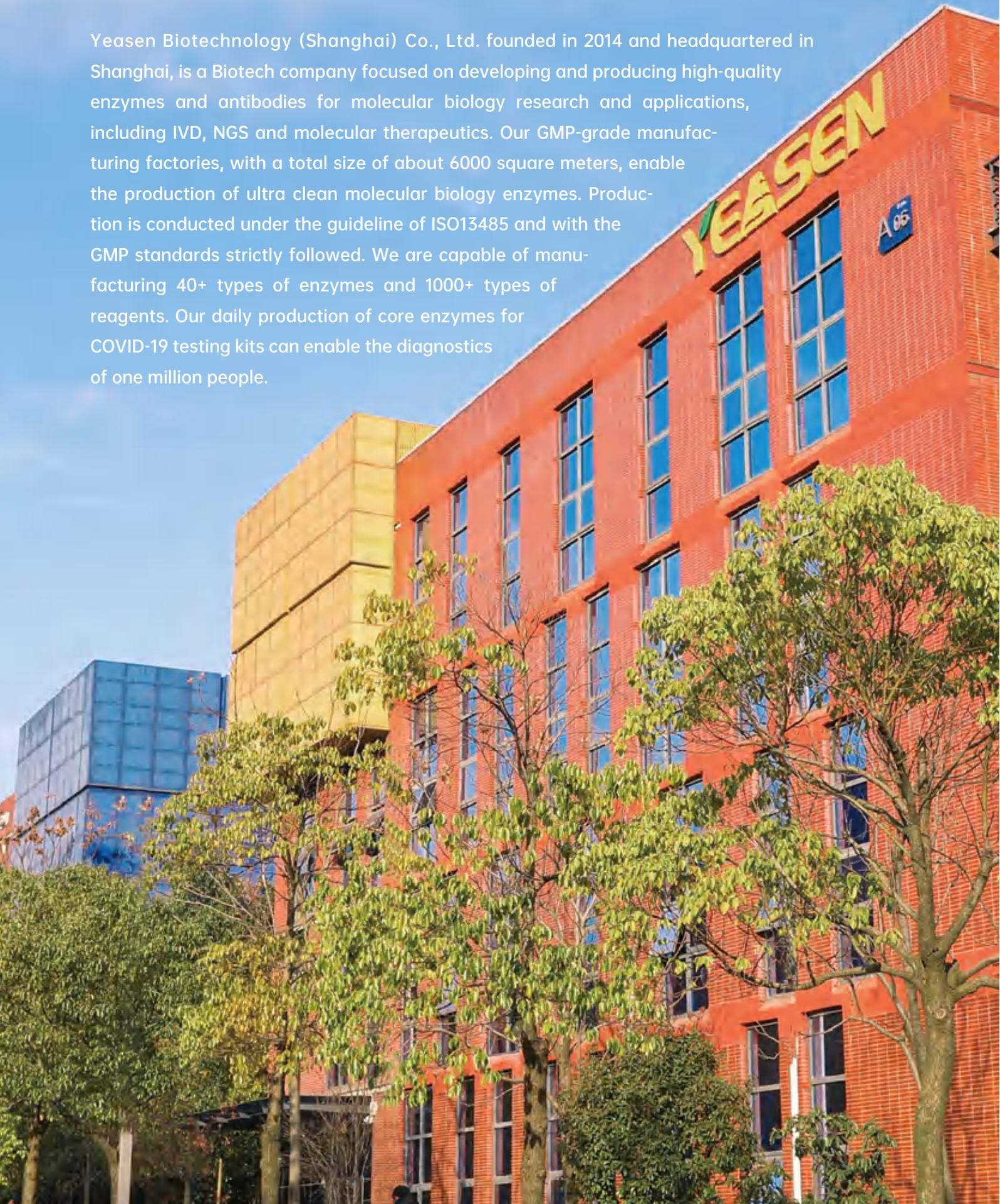
Innovative Leader in the Molecular
Biology Enzyme Industry

UCF.ME[®] UltraNuclease, GMP-grade

Yeasen Biotechnology (Shanghai) Co., Ltd.

About YEASEN

Yeasen Biotechnology (Shanghai) Co., Ltd. founded in 2014 and headquartered in Shanghai, is a Biotech company focused on developing and producing high-quality enzymes and antibodies for molecular biology research and applications, including IVD, NGS and molecular therapeutics. Our GMP-grade manufacturing factories, with a total size of about 6000 square meters, enable the production of ultra clean molecular biology enzymes. Production is conducted under the guideline of ISO13485 and with the GMP standards strictly followed. We are capable of manufacturing 40+ types of enzymes and 1000+ types of reagents. Our daily production of core enzymes for COVID-19 testing kits can enable the diagnostics of one million people.



What is UCF.ME[®] UltraNuclease?

UltraNuclease is a nonspecific endonuclease that cleavages and digests DNA and RNA of all formats (double-stranded, single-stranded, linear, circular, naturally occurring, or denatured) under a broad range of experimental conditions. It has been widely used for nucleic acid removal for numerous applications.



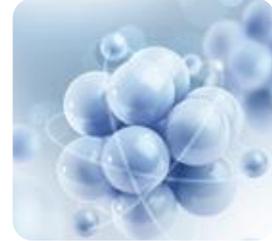
Lentivirus
Purification



Vaccine
Manufacturing



Drug
Purification



Cell Clumping
Prevention

With our dedicated R&D team's over 3 years of continuous refining, Yeasen has developed the gene-modified E. Coli-expressed UCF.ME[®] UltraNuclease, which is characterized by its exceptional purity and high nuclease activity. Manufactured under the GMP guideline, this product has no protease activity and is free of endotoxin or viral contaminants. It can be applied not only for scientific research but also for nucleic acid removal during biological products' manufacturing process.

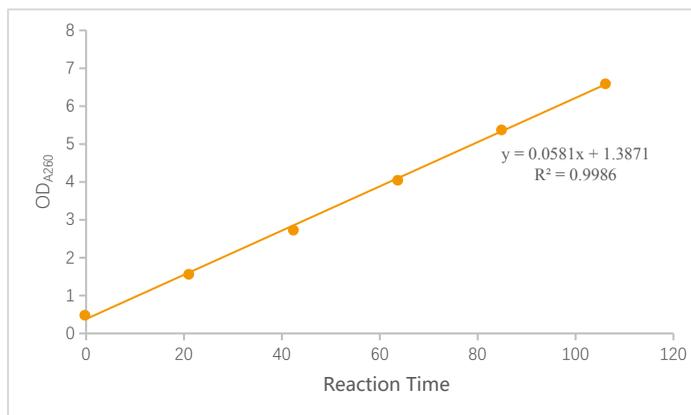
6 Reasons for Choosing UCF.ME[®] UltraNuclease

- ▶ 1. Digests DNA and RNA of all formats
- ▶ 2. Ultra-high nuclease activity; Reduces nucleic acid residues to pg-level within short periods of treatment.
- ▶ 3. Highly thermostable and stress-tolerant, compatible with various experimental conditions.
- ▶ 4. Non-animal origin, free of probiotics or endotoxins.
- ▶ 5. Manufactured under GMP guidelines; Capable of both research and scaled-up manufacturing.
- ▶ 6. Complete audit documentation, enabling smooth product certification application.



UCF.ME® UltraNuclease Nuclease Activity Quantification

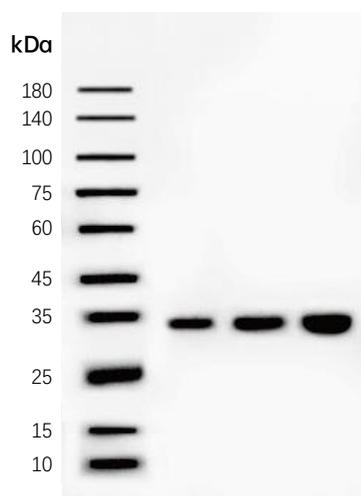
► UltraNuclease's specific activity quantification using universal substrate ($> 1.5 \times 10^6 \text{U/mg}$)



* The definition of one Activity unit (U) is the amount of enzyme used to change the absorption value of ΔA_{260} by 1.0 in 30 minutes in a 2.625 mL reaction system at 37°C with a pH of 8.0 (equivalent to complete digestion of 37 μg salmon sperm DNA into oligonucleotides).

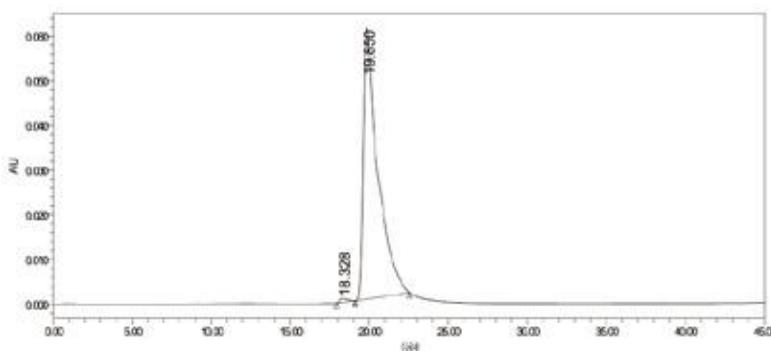
UCF.ME® UltraNuclease Purity Test

► SDS-PAGE purity test result: $\geq 99\%$



SDS-PAGE purity test result

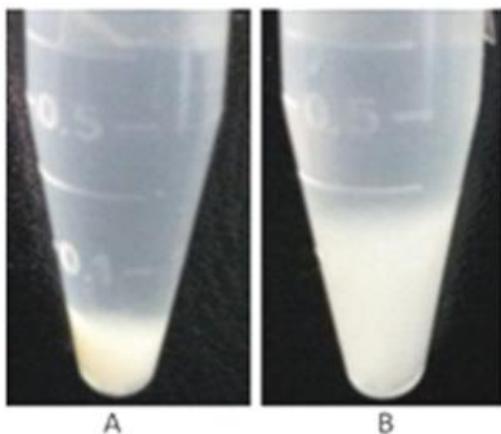
► SEC-HPLC purity test result: $\geq 99\%$



Peak	Retention Time (min)	Peak Area (%)
Minor Peak	18.328	0.79
Major Peak	19.850	99.21

SEC-HPLC purity test result

Application and Post-treatment Residues



Cell Lysate Viscosity Reduction

Tube A : Treated with 25U/mL UltraNuclease
Tube B : Without UltraNuclease Treatment

UCF.ME® UltraNuclease Quality Inspection

Catalog Number	20156ES	20157ES
Manufacturing Grade	RUO-grade	GMP-grade
Expression Host	<i>E. coli</i>	<i>E. coli</i>
Animal Originicity	yes	no
Antibiotics	yes	no
IPTG Residue Verification	—	✓
Manufacturing Standard	—	GMP
Appearance (Colorless)	✓	✓
Specific Activity	≥1.5×10 ⁶ U/mg	≥1.5×10 ⁶ U/mg
Protein Content (BCA)	≥0.1mg/mL	≥0.1mg/mL
Protein Purity SDS-PAGE (≥99%)	✓	✓
Protein Purity SEC-UPLC (≥99%)	—	✓
Proteinase Residues (universal substrate)	—	✓
Bacterial Endotoxin (gel-clot)	—	<0.25EU/1000U
Host Protein Residues (ELISA)	—	<10ppm (µg/mL)
1101 sterility test	—	✓
Pathogen (HIV/HBV/HCV) Detection (PCR)	—	✓

Tested and Qualified (✓) ; Test not performed (-)

Product Ordering Information

Product Name	Catalog Number	Size
UCF.ME® UltraNuclease	20156ES25/50/60	25/50/100KU
UCF.ME® UltraNuclease, GMP-grade	20157ES25/50/60	25/50/100KU

Visit our official website: www.yeasen.com for more information...

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