



# NuClean

## Efficient and rapid purification of biological drugs using a broad-spectrum nuclease

**Current nucleases function only near 37°C, preventing safe nucleic-acid removal from thermosensitive biologic drugs.**

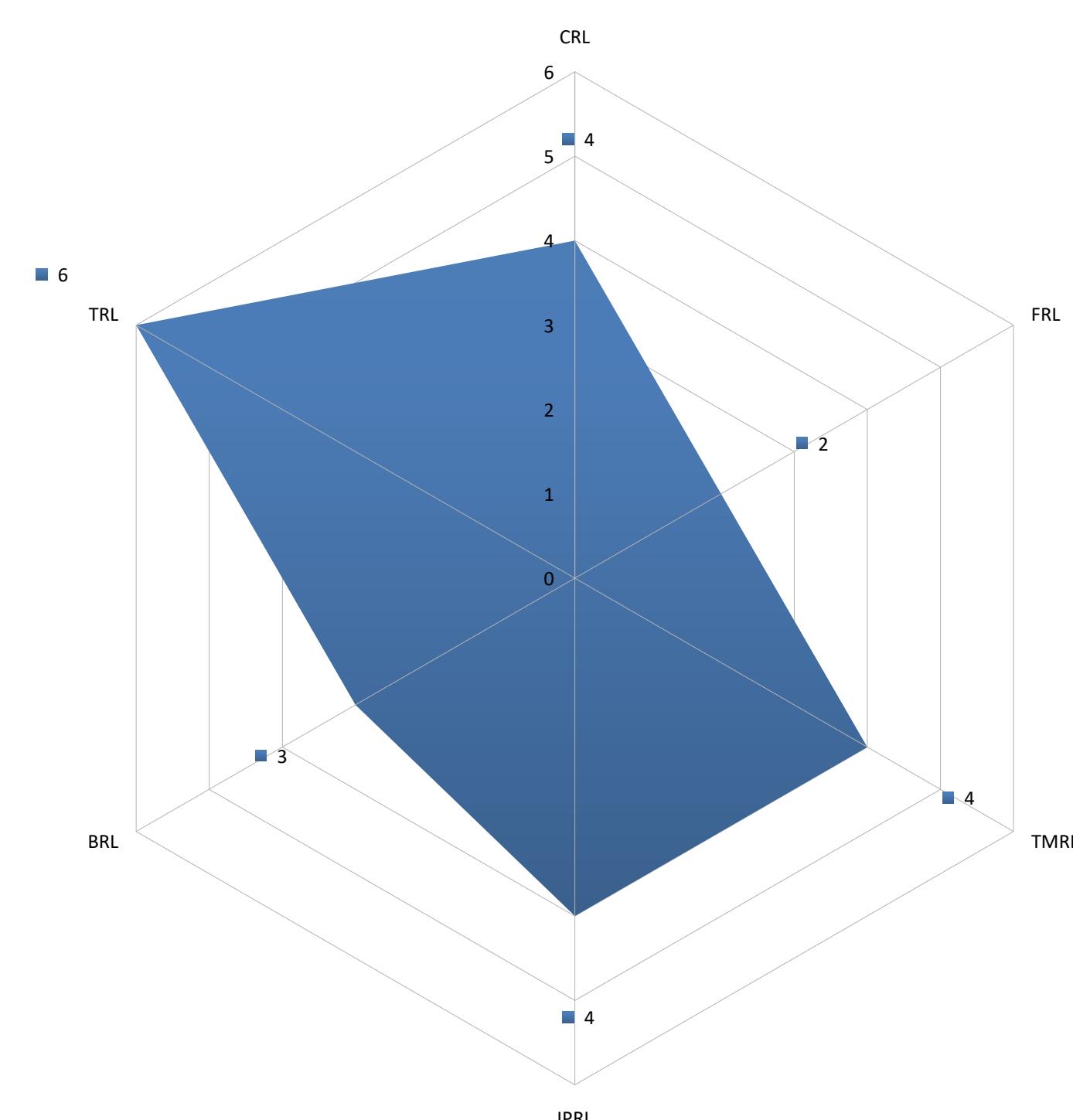
CLEANase is a uniquely engineered nuclease that preserves high catalytic activity at low temperatures, enabling safe nucleic-acid removal from thermosensitive biologics. Its scalable, low-temperature workflow reduces purification steps, shortens manufacturing time, and lowers costs while improving overall product safety and stability.

<b>CRYO-ACTIVE</b> Efficiently attacks and degrades DNA and RNA in lower temperatures (<20°C), ideal for sensitive substances.		<b>CLEANase</b> non-specific nuclease	<b>VERSATILE</b> Ideal for a variety of applications including: <ul style="list-style-type: none"><li>purification of proteins and other biologicals,</li><li>reduction of viscosity caused by nucleic acids,</li><li>sample preparation in electrophoresis or PCR.</li></ul>
<b>NON-SPECIFIC</b> Attacks and degrades all forms of DNA and RNA e.g. single-stranded, double-stranded, linear, or circularized.		<b>IRREVERSIBLE DEACTIVATION</b> Shortened protein purification process due to eliminating the need for additional steps. This streamlines workflows, improving efficiency and yield.	

Comparison of enzymes			
<b>MERCK</b>	<b>NuClean</b>	<b>QIAGEN</b>	
<b>Benzonase</b>	<b>CLEANase</b>	<b>Saltonase</b>	
Enzyme type	Nonspecific	Nonspecific	
Substrates	DNA & RNA	DNA & RNA	
Optimal pH	8.0-9.2	7.0-8.0	
Optimal temperature	37°C	20°C	
Irreversible deactivation	X	✓	

## Readiness Levels



## Opportunities to advance CLEAnase

**Academic cooperation:** Partners for research on low-temperature nuclease development  
**Partnership:** Industry pilots to validate CLEAnase in biologics purification  
**Funding:** \$500 000 seed funding for stabilization and scale-up  
**Commercialization:** CLEAnase offers strong entry potential for bioprocessing firms with multiple commercialization paths

**Core Team:** Highly skilled team with deep expertise in enzyme engineering and bioprocessing  
**IP Status:** Confirmed IPR protection options and identified what to protect based on business relevance  
**Funding:** Supported by a university grant and strong institutional backing from the university

## TOP 1000 INNOVATORS of POLAND in SILICON VALLEY December 2025

Poster funded by the Ministry of Science and Higher Education (MNiSW) as part of the "ScalePL" program.



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