



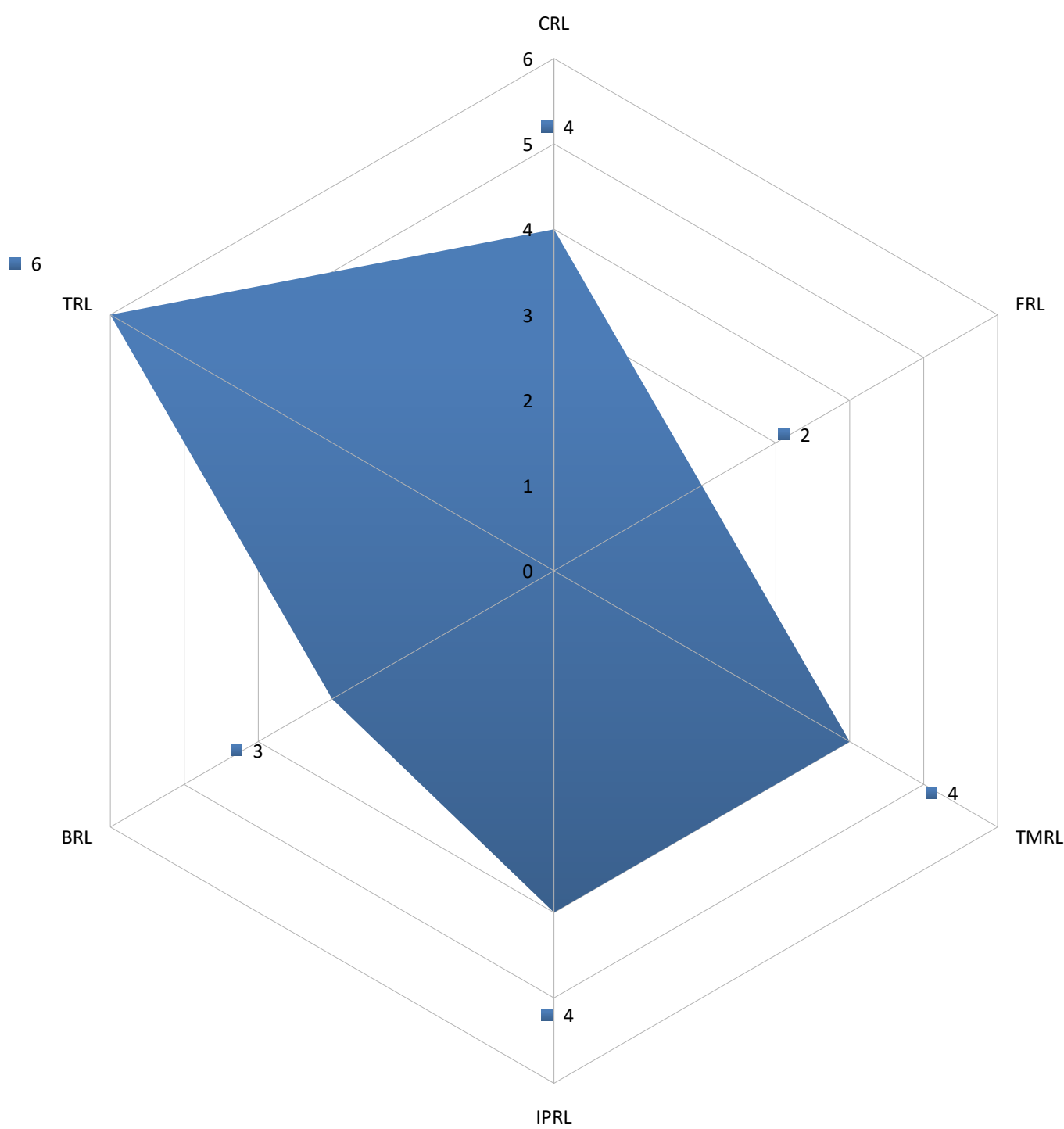
# NuClean

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.

## Readiness Levels



### CRYO-ACTIVE

Efficiently attacks and degrades DNA and RNA in lower temperatures (<20°C), ideal for sensitive substances.



### VERSATILE

Ideal for a variety of applications including:

- purification of proteins and other biologicals,
- reduction of viscosity caused by nucleic acids,
- sample preparation in electrophoresis or PCR.

## CLEANase

non-specific nuclease

### NON-SPECIFIC

Attacks and degrades all forms of DNA and RNA e.g. single-stranded, double-stranded, linear, or circularized.



### IRREVERSIBLE DEACTIVATION

Shortened protein purification process due to eliminating the need for additional steps. This streamlines workflows, improving efficiency and yield.

## 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

			
	<b>Benzonase</b>	<b>CLEANase</b>	<b>Saltonase</b>
			
Enzyme type	Nonspecific	Nonspecific	Nonspecific
Substrates	DNA & RNA	DNA & RNA	DNA & RNA
Optimal pH	8.0–9.2	7.0–8.0	7.5–8.5
Optimal temperature	37°C	20°C	37°C
Irreversible deactivation	X	✓	✓

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