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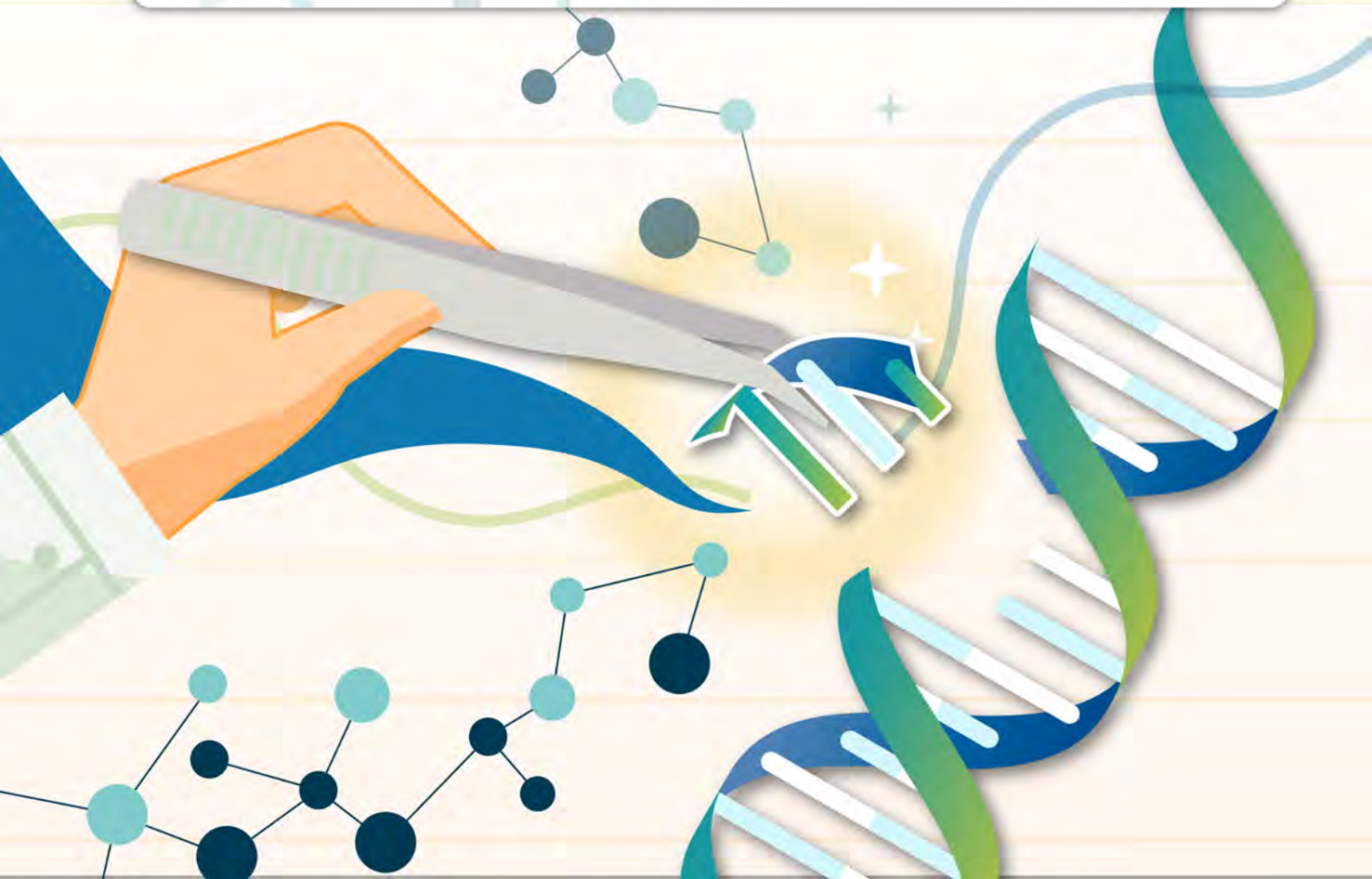
LEADGENE BIOMEDICAL, INC.

Enzyme and ELISA Solutions for for Glycan Removal and Quality Control

Explore Leadgene's innovative range of enzyme products and ELISA kits tailored for glycan removal, protein modification, and precise quality control.

With high specificity and reliability, these tools ensure seamless integration into biopharmaceutical production and glycoprotein analysis, delivering exceptional performance and efficiency.



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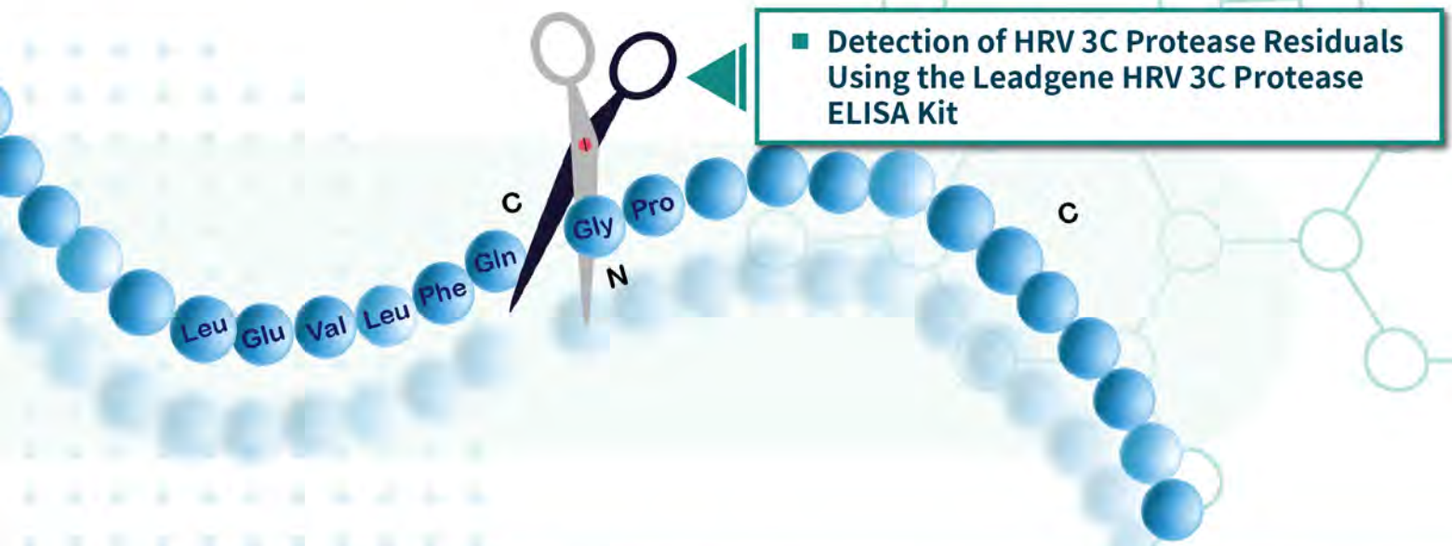
UniHRV 3C Protease

- **Human rhinovirus (HRV) 3C protease is employed to remove purification tags from proteins of interest following affinity chromatography.**

  It cleaves fusion proteins at the recognition sequence Leu-Glu-Val-Leu-Phe-Gln ↓ Gly-Pro (LEVLFQ ↓ GP), ensuring precise tag removal.

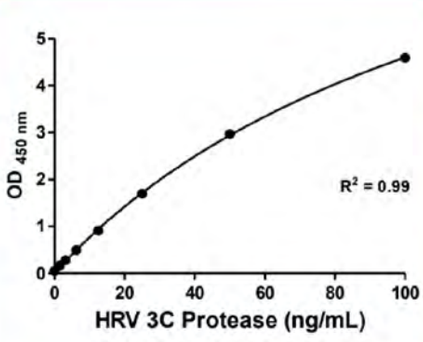
SDS-PAGE analysis of recombinant UniHRV 3C Protease Protein

- **Detection of HRV 3C Protease Residuals Using the Leadgene HRV 3C Protease ELISA Kit**



HRV 3C Protease ELISA Kit

Standard	HRV 3C Protease concentration (ng/mL)	$OD_{450\,nm}$
1	100	4.594
2	50	2.969
3	25	1.696
4	12.5	0.912
5	6.25	0.499
6	3.125	0.282
7	1.5625	0.175
Blank	Blank	0.053



UniHRV 3C Protease

HRV 3C Protease ELISA Kit

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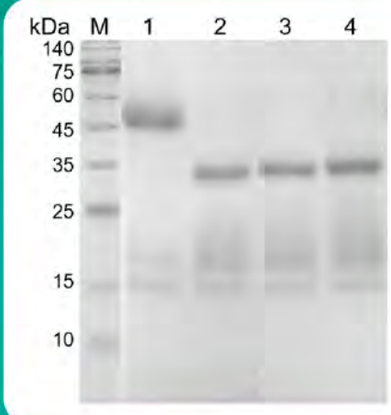
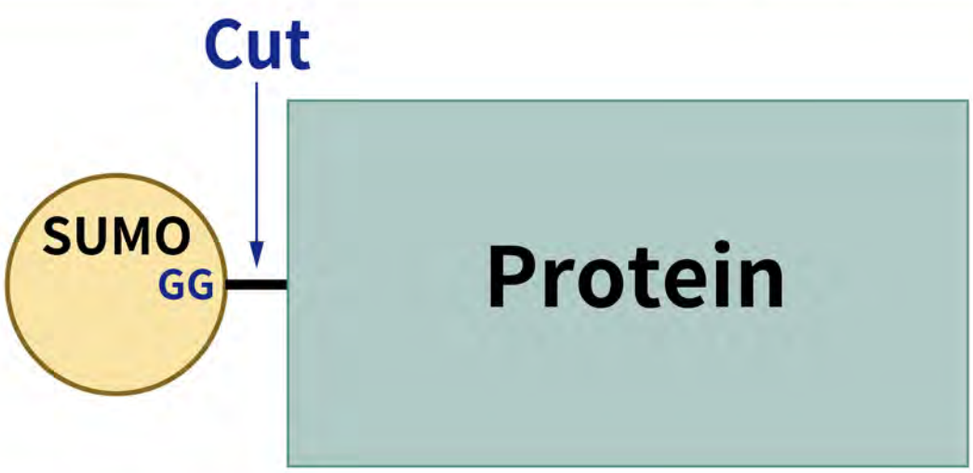
SUMO-Specific Protease 2 (SENP2)

- SENP2 features a C48 catalytic domain near its C terminus, enabling it to perform two key unctions in SUMO pathways: processing SUMO1, SUMO2, and SUMO3 propeptides for protein maturation, and removing SUMO modifications from target proteins.

  Additionally, its His-tag facilitates efficient purification using nickel affinity resins, making it ideal for streamlined applications.



SDS-PAGE analysis of substrate digested with SUMO-Specific Protease 2 (SENP2) in different ratio.



SUMO-Specific Protease 2 (SENP2)

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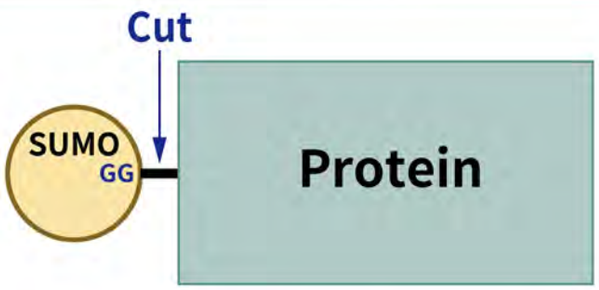
SUMO Protease (ULP1)

■ **Designed for high-specificity SUMO cleavage, ULP1 protease targets tertiary structure—not sequence—minimizing off-target effects. The His-tag enables quick removal with nickel resins for efficient downstream processing.**

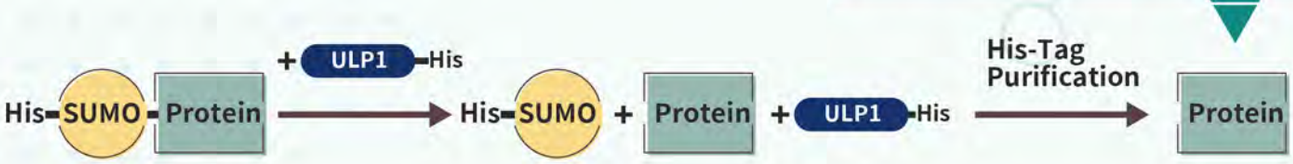
SUMO Protease (ULP1) cleavage of control protein.



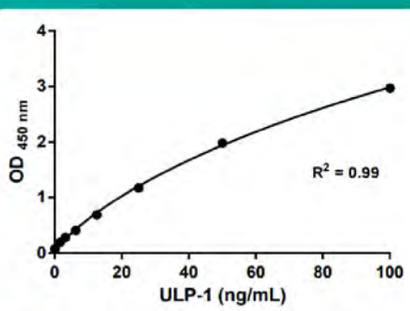
SUMO Protease (ULP1) ELISA Kit

SUMO-tag protein purification

■ **Detection of ULP1 Residuals Using the Leadgene SUMO Protease (ULP1) ELISA Kit**



Standard	ULP1 Protease concentration (ng/mL)	$OD_{450\,nm}$	
1	100	2.941	3.001
2	50	1.928	2.037
3	25	1.164	1.184
4	12.5	0.697	0.686
5	6.25	0.405	0.418
6	3.125	0.281	0.283
7	1.5625	0.19	0.198
Blank	Blank	0.074	0.075



SUMO Protease (ULP1) (Active)

SUMO Protease (ULP1) ELISA Kit

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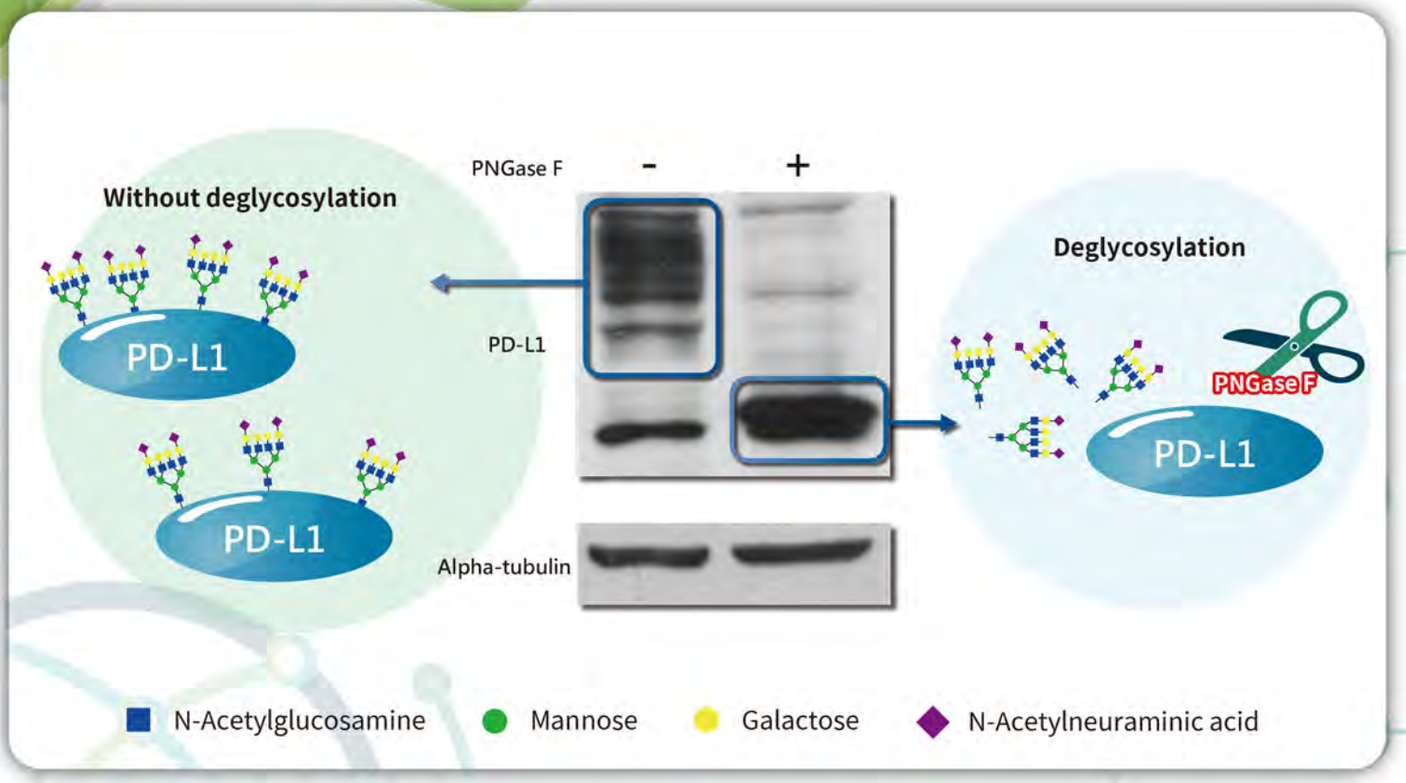
PNGase F



High Mannose Structure	Hybrid Structure	Complex Glycan Structure	Unglycosylated Protein
Cut	Cut	Cut	
High Mannose	Hybrid	Complex Glycan	N-Acetylglucosamine Mannose Galactose Fucose N-Acetylneuraminic acid

LeadGMP® PNGase F

PNGase F

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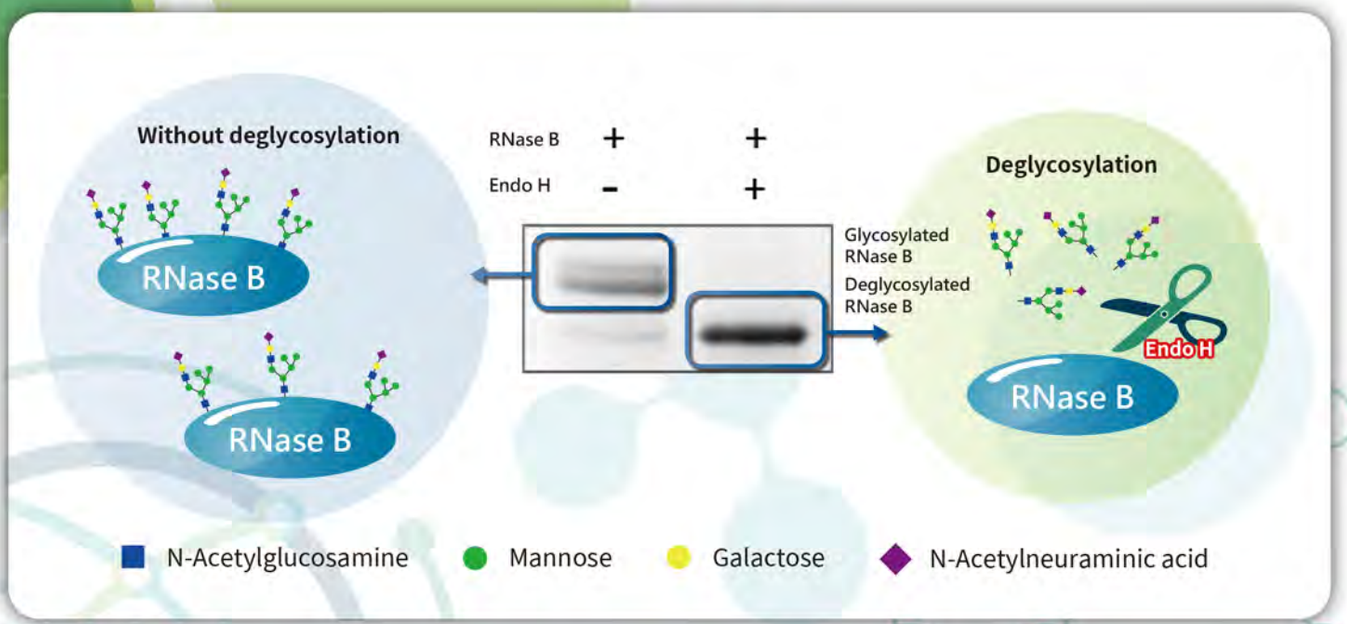
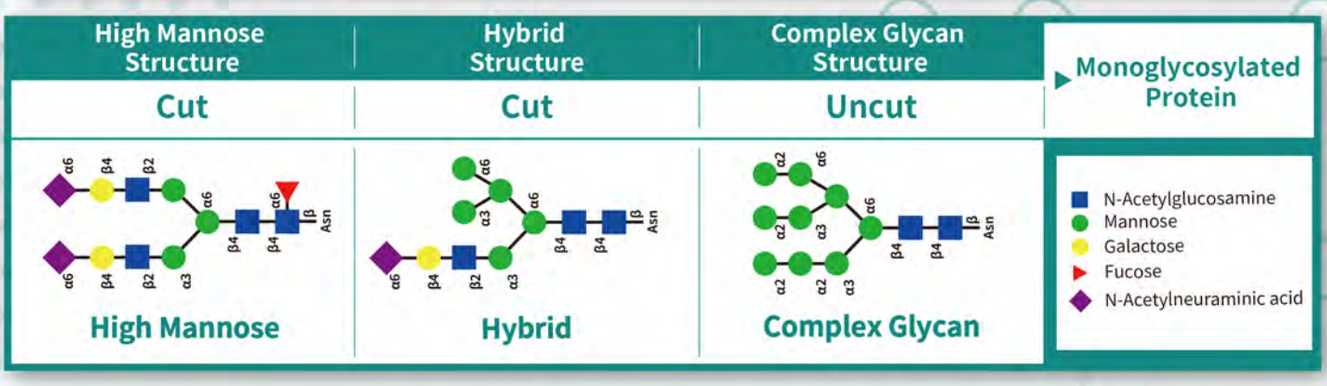
Endo H

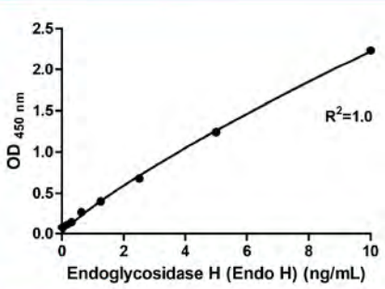




Endo H ELISA Kit

Detection of Endo H Residuals Using the Leadgene Endo H ELISA Kit

Standard	Endoglycosidase H (Endo H) (ng/mL)	OD_{450nm}	
1	10	2.274	2.198
2	5	1.241	1.245
3	2.5	0.689	0.671
4	1.25	0.436	0.372
5	0.625	0.291	0.249
6	0.3125	0.164	0.14
7	0.15625	0.122	0.104
Blank	0	0.081	0.085



Endoglycosidase H (Endo H)

Endoglycosidase H (Endo H) ELISA Kit

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Alpha-2,3-Sialidase

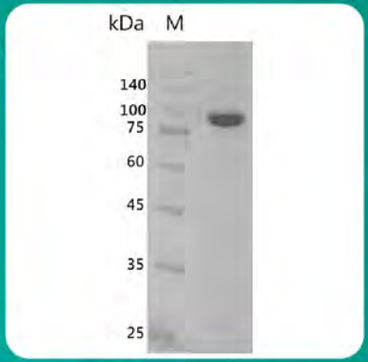
- Alpha-2,3-sialidase cleaves α-2,3-linked sialic acids from glycoproteins and glycolipids, impacting key biological processes and viral entry mechanisms, such as those seen in influenza infection

SDS-PAGE analysis of Fetuin digested with alpha-2,3-sialidase.

Alpha-1,3-Mannosidase

- Alpha-1,3-mannosidase plays a vital role in N-glycan trimming, ensuring accurate glycoprotein folding and stability.

  Its activity supports essential cellular functions—from immune defense to protein quality control—making it a powerful tool for glycoscience research and bioprocess optimization.



SDS-PAGE analysis of recombinant alpha-1,3-mannosidase.

Alpha-2,3-Sialidase

Alpha-1,3-Mannosidase

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Nuclease

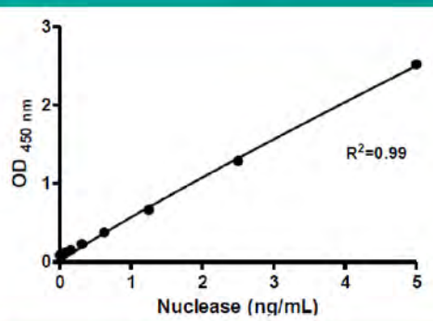
- Nuclease enzymes cleave phosphodiester bonds in nucleic acids, enabling precise DNA and RNA degradation. Advances in nuclease engineering have enhanced their specificity, stability, and efficiency, making them indispensable tools in cutting-edge technologies like CRISPR and next-generation sequencing.

  Widely used in genetic research, vaccine development, and precision medicine, nucleases empower innovation with unmatched accuracy and reliability.

Nuclease ELISA Kit

- The Leadgene Nuclease ELISA Kit offers a reliable and sensitive method for quantifying Nuclease in cleavage assay samples.

Standard	Nuclease (ng/mL)	$OD_{450\ nm}$	
1	5	2.47	2.563
2	2.5	1.316	1.26
3	1.25	0.673	0.661
4	0.625	0.37	0.39
5	0.3125	0.229	0.234
6	0.15625	0.154	0.161
7	0.078125	0.128	0.117
Blank	Blank	0.093	0.083



Nuclease

Nuclease ELISA Kit

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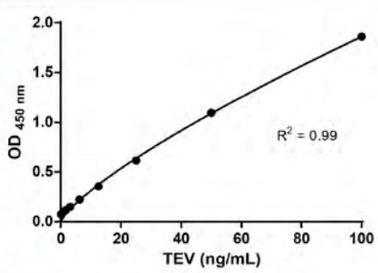
Other Quality Control Tools

TEV Protease ELISA Kit

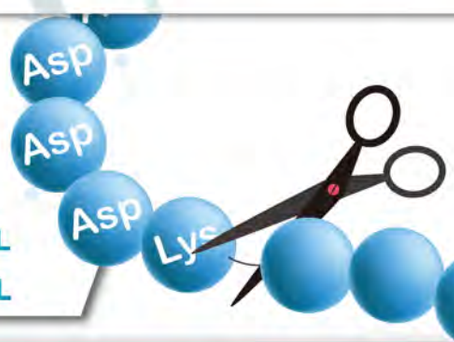
■ The Leadgene TEV Protease ELISA Kit offers a reliable and sensitive method for quantifying TEV protease in cleavage assay samples.

Standard	TEV Protease concentration (ng/mL)	OD 450 nm
1	100	1.863
2	50	1.097
3	25	0.617
4	12.5	0.356
5	6.25	0.224
6	3.125	0.151
7	1.5625	0.117
Blank	0	0.076



Enterokinase ELISA Kit

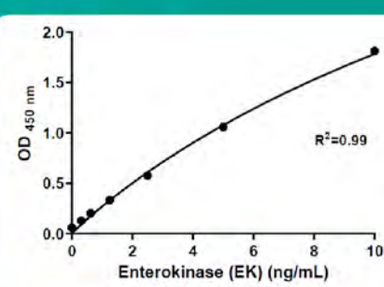
■ The Leadgene Enterokinase Protease ELISA Kit offers a reliable and sensitive method for quantifying Enterokinase in samples.



LoD: 0.007 ng/mL
LoQ: 0.032 ng/mL

- High specificity
- Great precision
- Quantitative Analysis

Standard	Enterokinase (ng/mL)	OD 450 nm	
1	20	2.745	2.627
2	10	1.802	1.823
3	5	1.027	1.088
4	2.5	0.582	0.569
5	1.25	0.326	0.34
6	0.625	0.19	0.214
7	0.3125	0.129	0.128
Blank	Blank	0.058	0.059



TEV Protease ELISA Kit

Enterokinase ELISA Kit

TEL :+886-6-2536677 (Headquarter)
+886-2-27065528 (Innovation & Research Center)
E-MAIL : bd@leadgene.com.tw

www.leadgenebio.com