中科睿极
REGEN-αGEEK

DASEA® UltraTryple®
recombinant enzymes

FDA CDER DMF: 039384
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PRODUCT INTRODUCTION

UltraTryple® is a recombinant serine protease free of animal-derived components. Compared to traditional trypsin, it has an extremely low risk of contamination from exogenous viruses, offering high biosafety. It can completely replace porcine or bovine trypsin in various fields of bioengineering. It is commonly used for applications such as adherent cell digestion, primary cell isolation, and the production of recombinant proteins and vaccines. Utilizing a calcium- and magnesium-free PBS buffer system, it provides mild digestion suitable for cell passaging processes in both serum-free and serum-containing systems. This product contains DPBS/1.1mM EDTA, which are stable at room temperature, and easy to store and use.

ADVANTAGES

Gentle
Ensures minimal cell damage, even after 30 minutes of consecutive digestion, with no effect on the phenotype and proliferation of protease-sensitive cells;

High Efficiency and Convenience
No inhibitor required, easy termination by dilution;

Extensive Application
Suitable for a diverse range of cell types (MSC, 293, VERO, MDCK, etc.);

Time-Saving
No thawing required, reduced preparation time, rapid cell separation, short digestion time;

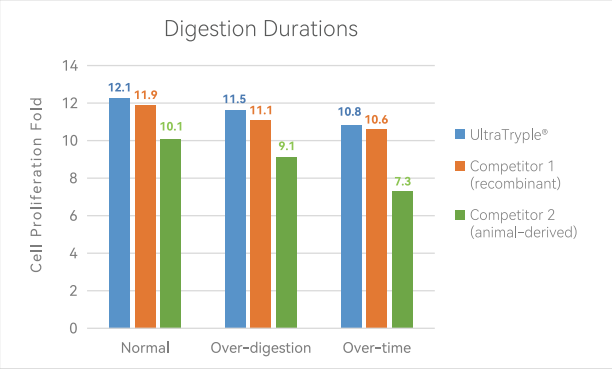
Animal Origin-Free (AOF)
No animal-derived components;

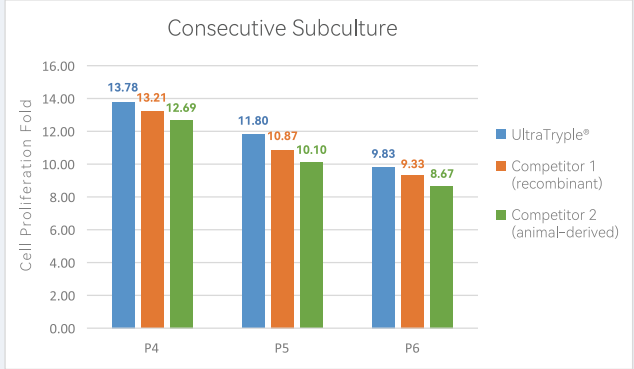
Stability
Long-term storage at room temperature, no refrigeration or -20℃ storage required for enhanced convenience.

PERFORMANCE DATA

Gentle

UltraTryple® outperforms Competitor 1 (recombinant) and Competitor 2 (animal-derived) in terms of fold expansion after consecutive subculturing of stem cells, with each passage's proliferation efficiency increasing by 5-20%.



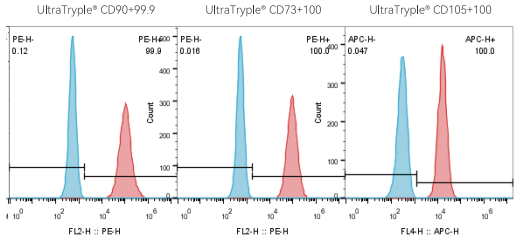


* Recover P3 of MSCs from cryogenic storage, Seed them at a density of 8,000 cells per square centimeter (cm^2) in T75 flasks. After consecutive subculture for 3 passages, use UltraTryple®, Competitor 1 (recombinant) and Competitor 2 (animal-derived) to digest the cells respectively.

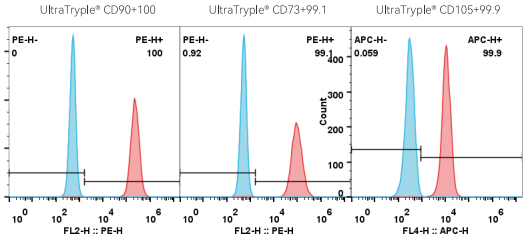
Under both normal and extended (30min) digestion conditions, UltraTryple® outperforms Competitor 1 (recombinant) and Competitor 2 (animal-derived) in preserving cell morphology.

UltraTryple®

Normal Digestion (3min)

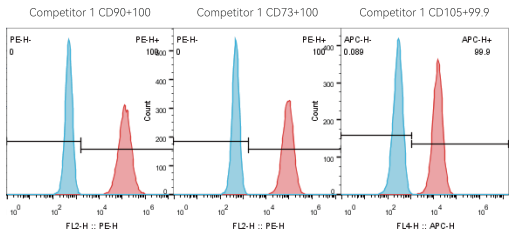


Extended Digestion (30min)

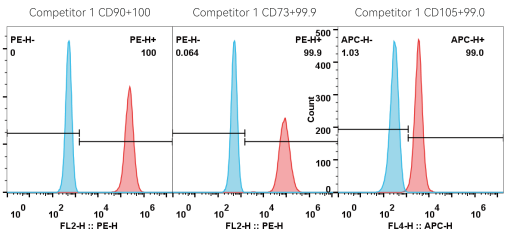


Competitor 1 (recombinant)

Normal Digestion (3min)

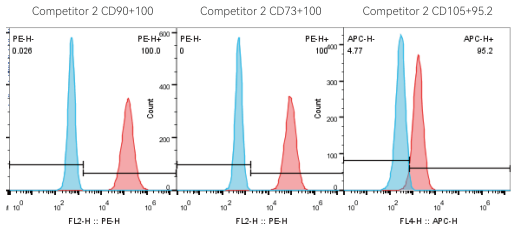


Extended Digestion (30min)

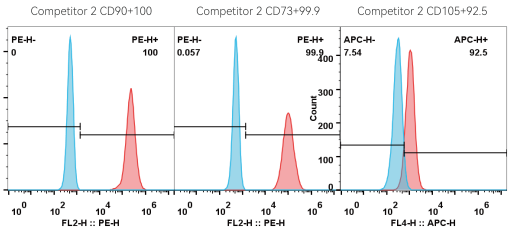


Competitor 2 (animal-derived)

Normal Digestion (3min)



Extended Digestion (30min)



* After three consecutive subcultures and 3 minutes of digestion, Competitor 2 digestion resulted in a decreased percentage of CD105-positive cells, while UltraTryple® digestion maintained normal cell morphology.

* After digestion for more than 30 minutes, Competitor 2 digestion resulted in a significantly decreased percentage of CD105-positive cells, while UltraTryple® digestion maintained normal cell morphology.

PERFORMANCE DATA

Broad Applicability

UltraTryple® is suitable for a diverse range of cell types, including strongly adherent cells. Moreover, it offers faster digestion times compared to competitors.

	Competitor 1 (recombinant)		Competitor 2 (animal-derived)		UltraTryple®	
Cell Type	Is it digestible	Digestive duration	Is it digestible	Digestive duration	Is it digestible	Digestive duration
MSC	Easy	3m30s	Easy	3m30s	Easy	3min
293	Easy	7m30s	Easy	Twice	Easy	6m30s
MDCK	Easy	50min	Difficult	/	Easy	40min
VERO	Easy	15min	Difficult	/	Easy	13min

* Test data is for reference only

Item	Competitor 1 (recombinant)	Competitor 2 (animal-derived)	UltraTryple®
Storage	Normal	-20℃	Normal
Transportation	Normal	Wet ice	Normal
Termination	Supernatant or PBS	Serum, Complete culture medium or protease inhibitor	Supernatant or PBS
Virus Detection	Not required	Required	Not required
Animal-derived	None	Contain	None
Effect	None	Affects surface proteins	None
EDTA	1.1mM	0.9mM	1.1mM
Capacity	★★★★★	★★★½☆	★★★★★
Concentration	1x	0.25%, can be diluted to 0.05%	Customizable

QUALITY STANDARD

Inspection Items	Inspection Standards
Sterility Test	Not detected
Osmolality	260-340 mOsm/kg
pH	7.0 - 7.4
Endotoxin	<0.25EU/mL
In Vitro Bioassay	Qualified
Mycoplasma	Not detected
Appearance	Pale yellow liquid

Enterprise Quality Management System

ORDER INFORMATION

Product	Package (per bottle)	P/N	Storage	Shelf Life
DASEA® UltraTryple® recombinant enzymes	100mL	RGM0061	Protect from light	1 year
	500mL	RGM0062		
DASEA® UltraTryple® recombinant enzymes (10X)	100mL	RGM0064		
	500mL	RGM0065		
Related Products				
Recombinant enzymes kit	Recombinant enzymes 100mL*2 units PBS 500mL*2	RGE0071	Protect from light	1 year
	Recombinant enzymes (10X) 100mL*2 units PBS 500mL*2 units EDTA (0.5M) 1mL*2 units	RGE0072		
	Recombinant enzymes 500mL*10 units PBS 500mL*10 units	RGE0073		
PBS	500mL/bottle	RGE0031		

REGEN-αGEEK (Haining) Biotechnology Co., Ltd.
Tel: +860755-26412015
Web: http://www.regengeek.com Email: enquiry@regengeek.com
Address: No. 301, Building 6, Juanhu Science and Innovation Park, No. 500, Shuiyue Pavilion East Road, Xiashi Street, Haining City, Jiaxing City, Zhejiang Province, China.