KRISHGEN BioSystems
OUR REAGENTS, YOUR RESEARCH

KRISHZYME™ Recombinant Trypsin, powder

Catalog Number: KLPL10206 / KLPL10207 / KLP10208

Description

Trypsin specifically cleaves C-terminal peptide bonds of lysine and arginine, which can degrade intercellular binding proteins. The amino acid sequence of the recombinant trypsin produced by us is the same as that of porcine pancreas-derived trypsin, and is produced by recombinant Escherichia coli expression. It can replace traditional extraction of trypsin for cell digestion in vaccines, stem cells, immune cell therapy, drug screening, antibodies and other fields. Aprotinin, soybean trypsin inhibitor, etc. can distinctly inhibit enzyme activity. Recombinant trypsin has the same properties as naturally extracted trypsin.

This product is manufactured in an ISO13485 certified laboratory. No animal-origin raw materials are used in the fermentation, purification, and final ingredients.

Expression Host:

E.coli

Purity:

>90% as determined by SDS-PAGE quantitative densitometry by Coomassie Blue Staining.
(RP-HPLC) - Beta-Trypsin >70%
(RP-HPLC) - Alpha Trypsin < 20%

Iso-Electric Point:

8.26

Endotoxin:

< 20 EU/1000 units as determined by the LAL method.

Host Cell Proteins (E.coli):
< 0.01%
Host Cell DNA Residue:
< 10ng/ml

Unit Definition:

25ºC, pH 7.6, 3.2ml reaction solution(1cm light path), one trypsin unit (U) was defined as an increase of 0.003 in the absorption value at 253nm by enzymatic hydrolysis of BAEE pe minute.

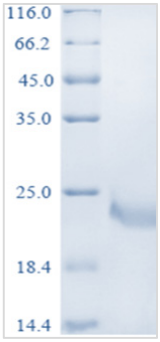
Formulation:

KRISHZYME™ Recombinant Trypsin is supplied as a lyophilized powder from a buffer containing 50 mM Tris-HCl, pH 7.6.

Molecular Mass:

The KRISHZYME™ Recombinant Trypsin has a calculated molecular mass of ~24 kDa

SDS-PAGE:
Fig.1.



KDa Marker 10-120

Fig. 1. Purity analysis by SDS-PAGE Detection

Reconstitution:

Being an enzyme, the concentration may differ from lot to lot. We always recommend referring the accompanying data sheet to view the exact concentration and the recommended dilution schemata.

Centrifuge the vial at 4ºC before opening to recover the entire contents. Please contact us for any concerns or special requirements at +91-22-49198700 | Email: sales1@krishgen.com

Storage:

Store it under sterile conditions at -20ºC to -80ºC upon receiving for at least 12 months. It is recommended to aliquot the enzyme into smaller quantities for optimal storage. Avoid repeated freeze-thaw cycles.

Product Instruction

Long-term storage: If the prepared recombinant cell digestion solution needs to be stored for a longer period, Store at -20°C not exceeding 12 months from date of preparation.

Application:

For Cell Culture
- Tissue block digestion, primary cell acquisition.
- Passage digestion of adherent cells.
- Cell culture by microcarrier method.

- Gently digesting stem cells.
- Immune cell therapy, etc.

For Recombinant Protein
- Recombinant insulin production.
- Protein sequencing, peptide mapping.
- Specific proteolytic processes such as proteomics research.

References:

Recombinant trypsin production in high cell density fed-batch cultures in Escherichia coli
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High-level production of recombinant trypsin in transgenic rice cell culture through utilization of an alternative carbon source and recycling system
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Addressing common challenges of biotherapeutic protein peptide mapping using recombinant trypsin
T Menneteau, S Saveliev, CI Butré, AKG Rivera… - … of Pharmaceutical and …, 2024 - Elsevier

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