

# Data Sheet



## Recombinant Trypsin

100% Animal Origin Free (AOF) Level 3

Cat. No.	Formulation	Sales Unit	Activity
ETR0001	Powder	100 mg – 1 g	>3800 Units/mg protein

### Description:

Trypsin (23.4 kDa) is a serine endoprotease that cleaves amide and ester bonds after the amino acids Arginine (Arg) and Lysine (Lys).

The recombinant trypsin is expressed in *Pichia pastoris* using an artificially synthesized gene as genetic construct. The product is manufactured under GMP, is 100 % Animal Origin Free (AOF) level 3, stable, and free from viral contaminants and contaminating proteases such as Carboxypeptidase A and Chymotrypsin. The product has a purity > 98%.

### Applications:

The product has been developed for use in biopharmaceutical manufacturing processes requiring GMP grade, 100 % AOF level 3, trypsin, specifically in:

- 1. Insulin Manufacturing:** To convert proinsulin to insulin by cleaving Arg amino acids at positions B31 and B32 and Lys and Arg amino acids at positions B64 and B65
- 2. Vaccine Manufacturing:** To passage cells and accentuate viral propagation via proteolytic action

Additionally, both products can be used in:

1. Cell culturing for detaching adherent cells
2. Proteomics to cleave specific amino acids
3. Process aid in food processing
4. Manufacturing cosmetics

### Specifications:

White to off-white, odorless powder

Protein by UV280 method  
> 0.6 mg/mg powder

Specific Activity (Protein by UV 280 Method)  
> 3800 Units/mg

Purity by GPC-HPLC  
> 98%

TVAC  
< 10<sup>2</sup> cfu/g

TYMC  
< 10<sup>4</sup> cfu/g

Pathogens  
Absent

Cell Culturing: Tested for cell dissociation on CHO-K1, Vero, MRC-5, and MDCK cells

### Storage and Handling:

Store at 2°C to 8°C upon receipt

### Guidelines for Use:

#### Cell Culturing:

1. Add an appropriate amount from the aliquots/master vial to prepare one time use working solution in appropriate buffer at pH 7.2-7.8 (e.g. 1X PBS OR Cell Culture Media without Fetal Bovine Serum). It is recommended to use buffers free of Ca<sup>2+</sup> and Mg<sup>2+</sup> containing EDTA for optimal results
2. Mix the solution well for 1-2 minutes. Do not agitate, do not form bubbles
3. Check pH of the working stock. If necessary, adjust the pH to 7.2- 7.8 with 1M Tris base or 1N HCl
4. Filter the solution under aseptic conditions
5. Do not store over 3 weeks at 2°C to 8°C
6. Store at -15°C to -25°C for prolonged storage up to 2 months
7. Working solutions can sustain upto 5 freeze-thaw cycles without losing potency for cell dissociation. However, it is best practice to minimize the number of freeze-thaw cycles

*The products are not for human or animal consumption, or use as a drug. Please refer to the MSDS of the products for detailed safety profile*