Data Sheet (Cat.No.TRP-00618)

TargetMol

Neutral protease I

Chemical Properties

CAS No. :

Formula:

Molecular Weight:

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Neutral protease I (Dispase I) is a rapid, effective, and mild neutral protease used to separate the epidermal layer from the dermal layer. It can also separate intact epithelial cell layers from cultures without affecting the vitality of epithelial cells, even while digesting the basement membrane area. Additionally, Neutral protease I prevents cell clumping in suspension cultures and can hydrolyze fibronectin and type IV collagen, but it does not hydrolyze laminin, type V collagen, serum albumin, or transferrin.
Targets(IC50)	Others
In vitro	Usage instructions (for reference only) : 1. Solution preparation: Dissolve an appropriate amount of freeze-dried powder in a calcium and magnesium-free DPBS buffer solution to prepare a 10 mg/mL stock solution. Filter and sterilize it through a 0.22 μM filter membrane. When using, dilute this stock solution with DPBS to the working concentration. The commonly used working concentration for cell separation is 0.6 - 2.4 U/mL. Note: It is recommended to avoid using concentrations higher than 2.4 U/mL. 2. Tissue dissociation: Cut the tissue into 3-4 mm small pieces, then wash with sterile PBS. Add Dispase II solution (concentration of 0.6 - 2.4 U/mL) to ensure that the tissue is completely immersed in the solution. Incubate at 37°C and gently stir until the tissue is completely dissociated. For tissues that are difficult to dissociate, the separation effect can usually be achieved within 1 hour. Extending the incubation time will not significantly affect cell viability. If necessary, filter the digestion product through a sterile stainless steel mesh sieve to separate single cells from the remaining tissue blocks, or gently pour off the upper layer of cells after the large tissue pieces have settled. If necessary, use fresh Dispase solution to further dissociate the remaining tissue. Centrifuge and precipitate the cells, discard the enzyme solution; resuspend the cell precipitate in the culture medium and culture under normal conditions. 3. Cell passage: Treat the cells with preheated to 37°C Dispase solution for 5 minutes; remove the solution, then incubate at 37°C for another 10 minutes; inspect the cell separation condition under a microscope; if necessary, continue incubation for 15 minutes; resuspend the cells in the culture medium, gently rotate to precipitate the cells, wash the precipitated cells with the culture medium; finally, replace with fresh culture medium to resuspend the cells and follow the regular procedure for plating.