UIP

Cat: P2070
Specification: 1000U(200μL)
Storage: SUMO Protease can be stored for 2 years at -80℃; after first use, it can be stored at -20℃ to avoid repeated freezing and thawing. SUMO Protease Buffer can be stored at -20℃.

Product Components:

Reagent Name	Specification	Storage Temperature
SUMO Protease （5U/μL）	200μL	-80℃
SUMO Protease Buffer	2mL	-20℃
Instruction Manual	1 copy	Room Temperature

Introduction

SUMO protease, also known as Ulp, is a highly active cysteine protease that recognizes the tertiary structure of SUMO proteins, rather than the amino acid sequence, and can efficiently and specifically cleave SUMO proteins from recombinant fusion proteins. SUMO protease maintains high activity in a wide range of reaction environments, such as temperatures ranging from 4 to 30°C and pH (5.5-9.5). SUMO protease carries a poly-His tag, which facilitates the removal of the protease using affinity chromatography after fusion protein cleavage.

Enzyme Activity Definition:

In 1× SUMO Protease Buffer (50 mM Tris-HCl, 1 mM DTT, pH 8.0), the amount of enzyme required to cleave >85% of a 2 μg substrate at 30°C for 1 hour is defined as one activity unit.

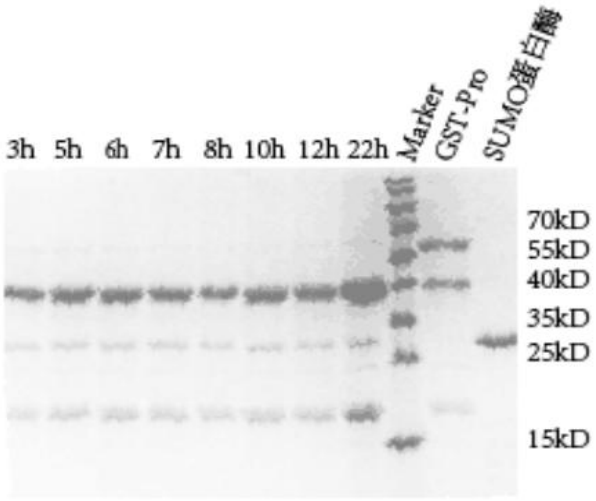
Instructions for Use:

1. The ratio of SUMO protease to the target protein that requires enzymatic cleavage is 1:100.
2. Enzyme digestion system:

Fusion protein	1000 μg
SUMO Protease Buffer	20μL
SUMO protease	2μL
ddH_2O to	1000μL

3. Enzyme digestion conditions: It is recommended to digest at 4℃ overnight. Users can explore according to their own research target proteins. The following enzyme digestion analysis images are for reference.
4. After enzyme digestion, a small amount of sample can be taken for SDS-PAGE analysis. If SUMO protease in the system after enzyme digestion needs to be removed, His tag purification resin affinity chromatography can be used

SDS-PAGE analysis diagram after enzyme digestion



SDS-PAGE electrophoresis diagram after 4℃ enzyme digestion for 3h; 5h; 6h; 7h; 8h; 10h; 12h; 22h.

Note: For more documents using this product, please refer to the www.solarbio.com.

1. To achieve the best enzyme digestion effect, please ensure that the recombinant protein is partially or fully purified.
2. For most fusion proteins, the optimal concentration of NaCl in the reaction buffer for SUMO protease is 150 mM. However, the concentration of NaCl can be adjusted between 100 mM and 300 mM to achieve the best results, depending on the actual situation. The concentration of salt in the fusion protein should be considered during the experiment.
3. The concentration of imidazole should be lower than 150mM, as higher concentrations will affect the activity of SUMO protease.