



SUMO Protease 1 (Cat. No. 4010)

Description and Application

SUMO Protease, a highly active and robust recombinant protease, cleaves SUMO (Small Ubiquitin-like MOdifier) from recombinant fusion proteins. Unlike thrombin, EK, or TEV protease, whose recognition sequences are short and degenerate, SUMO Protease recognizes the tertiary sequence of SUMO. As a result, SUMO Protease will not cleave within the fused protein of interest. SUMO Protease cleaves consistently over a broad range of temperature (30°C is optimal), pH [5.5 – 9.5], and ionic strength. SUMO Protease contains a polyhistidine tag at the N-terminus; therefore, SUMO Protease is easily removed from the cleavage reaction by affinity chromatography.

Components

Units: 250, 500, 1000, 5000 units

Unit Definition

One unit of SUMO Protease 1 cleaves 90% of 100 µg of SUMO-GFP in 1 h at 30°C.

Storage Conditions

1. Store vial at -80°C
2. Aliquot and store at -80°C after thawing. Avoid repeated freeze-thaw cycles. SUMO Protease is stable for more than one year under these conditions.

Protocol

1. After SUMO-protein fusion is purified: dialyze sample against proper buffer (e.g. PBS, pH 7.4 or 20mM TRIS, pH 8.0 containing 150 mM NaCl) at 4°C
2. Add SUMO Protease 1 to substrate (1 unit enzyme to 10-100 µg substrate should suffice, depends on SUMO fusion protein); add DTT to final 2 mM
3. Either:
 - a. incubate the mixture at 30°C for 1 h (mix gently do not vortex),
 - or
 - b. incubate the mixture at 4°C overnight (you can also perform a. followed by b.)
4. Check the cleavage using SDS-PAGE. If the SUMO-fusion is not cleaved up to 95% add more SUMO protease 1.

References

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