



Cat. No. 4020 SUMO Protease 2

Description and Application

SUMO Protease 2, 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 2 recognizes the tertiary sequence of SUMO3. As a result, SUMO Protease 2 never cleaves within the fused protein of interest. SUMO Protease 2 cleaves consistently over a broad range of temperature (30°C is optimal), pH [5.5 – 9.5], and ionic strength. SUMO Protease 2 contains a polyhistidine tag at the N-terminus; therefore, SUMO Protease 2 is easily removed from the cleavage reaction by affinity chromatography.

Components

Units: 500, 1000, 5000, 10000 units

Unit Definition

One unit of SUMO Protease cleaves $\geq 90\%$ of 100 μg of SUMO3-GFP in 1 h at 30°C.

Storage Conditions

1. Store vial at -80°C.
2. After thawing, aliquot the enzyme and store single use aliquots at -80°C. Avoid repeated freeze-thaw cycles. SUMO Protease is stable for more than one year under these conditions.

Protocol

1. After SUMO3-protein fusion is purified: dialyze sample against proper buffer (e.g. PBS, pH 7.4 or 20 mM TRIS buffer containing 150 mM NaCl, pH 8.0) at 4°C.
2. Add SUMO Protease 2 to substrate (1 unit enzyme to 10-100 μg substrate should suffice, depends on SUMO3 fusion protein); add DTT to 2 mM final.
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 SUMO3-fusion is not cleaved up to 95%, add more SUMO protease 2.

References

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