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Data Sheet

Turbo TEV Protease

Catalog #: 50308

Formulated in: 25 mM Tris-HCl, pH8.0, 50 mM NaCl, 1 mM TCEP, 50% glycerol

Stability: Retains >80% activity after storage @ RT for over 65 hours. Store at -20°C.

References:

1. Timmer JC, Salvesen GS. *Methods Mol Biol.* 2011;**753:243**-55.

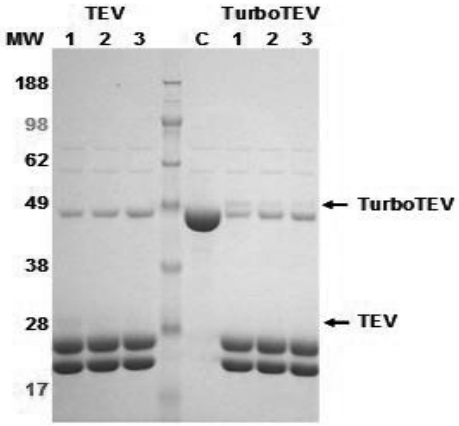
Description: TurboTEV Protease with GST and His-tags (can be easily removed by either Ni-chelating or Glutathione (GSH) resin along with the cleaved tag.), MW = 52 kDa in an E.Coli expression system.

Specific Activity: > 10 Units/µg. 1 Unit of TurboTEV Protease cleaves >85% of 3 mg of control substrate in 1 hour at 30°C. No non-specific cleavage has been observed under the same condition when TurboTEV Protease and the control target protein were mixed at 1:10 ratio. Assay Conditions: A 49 kDa GST-fusion protein (C) at 1 mg/ml is incubated with TurboTEV or TEV Protease in a buffer of 25 mM Tris-HCl, pH 8.0, 150 mM NaCl, 14 mM β-mercaptoethanol at 4°C for 16 hours. The cleaved products are 27 kDa and 22 kDa.

Application: Useful for the study of enzyme kinetics, screening inhibitors, and selectivity profiling.

Quality Assurance

SDS-PAGE
Coomassie staining



MW: 52 kDa

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PROTOCOL

Cleavage Condition

It is recommended to test TurboTEV Protease cleavage with a protease-to-target protein ratio of 1:100 (w/w) or 1 unit of TurboTEV to 10 µg of target protein in a buffer suitable for the target protein at 4°C overnight, with the target protein concentration at 1-2 mg/ml. In most cases, >90% of target protein is cleaved with a TurboTEV-to-target protein ratio of 1:50 to 1:200 or 1 unit TurboTEV to 5-20 µg of target protein (as shown in Figure 1). The efficiency of cleavage may vary due to the sequences around the cleavage site, the conformation and the solubility of the target protein. Due to its high specificity, more TurboTEV Protease (at 1:10 ratio) or longer cleavage time (over a weekend) at higher temperature (37°C) can be used to achieve high cleavage efficiency without non-specific cleavage of target proteins.

Removal of TurboTEV Protease after Cleavage

TurboTEV Protease contains both GST and His tags. After cleavage of the target protein, TurboTEV Protease is easily removed along with the tags from the cleavage reaction by affinity chromatography using Ni-chelating resin for His-tagged target protein or GSH resin for GST-tagged target protein.