

# MobiTEV Protease2 (TurboTEV), recombinant, His- & GST-Tag



Product Information Sheet  
# PR-ETA10050

## SUMMARY

shipped on blue ice; store at -20 °C (storage buffer contains 50% glycerol)

For research use only

## Description

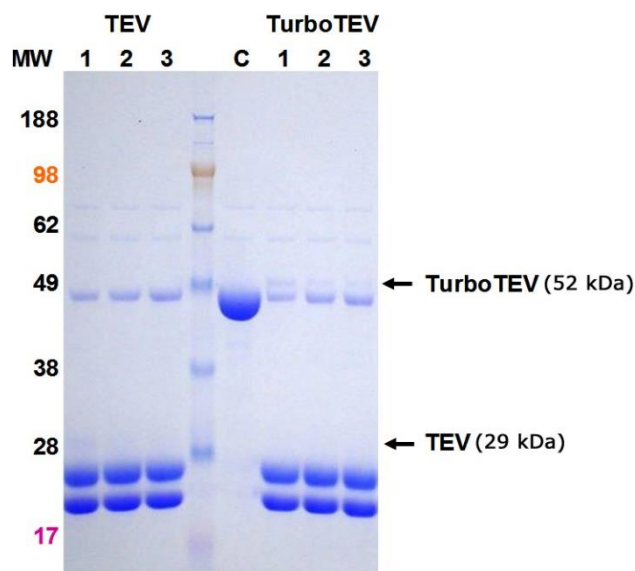
MobiTEV Protease2 (TurboTEV) contains an enhanced form of a catalytic fragment of the N1a protein of Tobacco etch virus (TEV), a cysteine protease that recognizes the cleavage site of Glu-Asn-Leu-Tyr-Phe-Gln-Gly and cleaves between Gln and Gly. MobiTEV Protease2 (short: MobiTEV2) is a restriction grade protease that has a robust activity at 4 °C with high specificity and great stability. It does not require any special buffer for its activity and can be used in a buffer most suitable for the target protein. MobiTEV2 is a 52 kDa protein with both GST and His tags so it can be easily removed by either Ni-chelating or Glutathione (GSH) resin along with the cleaved tag.

## Formulation & Storage

**MobiTEV Protease2 (TurboTEV):** 1 mg (10'000 units)/ 0.5 ml in 25 mM Tris-HCl, pH 8.0, 50 mM NaCl, 1 mM TCEP, 50% glycerol. Store MobiTEV Protease2 at -20 °C. The protease retains >80% activity after storage at room temperature for over 65 hours.

## Activity and Specificity

MobiTEV2 (TurboTEV) is a 52 kDa protein. It has a specific activity of at least 10'000 units/mg, using the conventionally defined activity unit (1 unit cleaves  $\geq 85\%$  of 3  $\mu$ g control substrate in 1 hour at 30 °C). In practice, 1 mg (10'000 units) of MobiTEV2 cleaves >90% of 100 mg of a control target protein at 4 °C in 16 hours. No non-specific cleavage has been observed under the same condition when MobiTEV2 and the control target protein was mixed at 1:10 ratio.



**Figure 1**

A 49 kDa GST-fusion protein (lane C) at 1 mg/ml is incubated with MobiTEV2 (TurboTEV) or TEV Protease at a ratio of (lane 1) 1:50, (lane 2) 1:100, (lane 3) 1:200 (w/w) in a buffer of 25 mM Tris-HCl, pH 8.0, 150 mM NaCl, 14 mM  $\beta$ -mercaptoethanol at 4 °C for 16 hours. The cleaved products are 27 kDa and 22 kDa. Both proteases show the same results.

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## Cleavage Condition

It is recommended to test MobiTEV2 cleavage with a protease-to-target protein ratio of 1:100 (w/w) or 1 unit of MobiTEV2 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 MobiTEV2-to-target protein ratio of 1:50 to 1:200 or 1 unit MobiTEV2 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 MobiTEV2 (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 MobiTEV Protease2 after Cleavage

MobiTEV Protease2 contains both GST and His tags. After cleavage of the target protein, the 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.

## Order Information, Shipping and Storage

Order#	Product	Amount
PR-ETA10050-01	MobiTEV Protease2 (TurboTEV), recombinant, GST- & His-tag	100 U
PR-ETA10050-02	MobiTEV Protease2 (TurboTEV), recombinant, GST- & His-tag	500 U
PR-ETA10050-03	MobiTEV Protease2 (TurboTEV), recombinant, GST- & His-tag	1,000 U
PR-ETA10050-04	MobiTEV Protease2 (TurboTEV), recombinant, GST- & His-tag	10,000 U
shipped on blue ice; store at -20 °C		

## Contact and Support

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### Customer Service – General inquiries & orders information

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e-mail: [order@mobitec.com](mailto:order@mobitec.com)

### Technical Service – Product

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**MoBiTec in your area:** Find your local distributor at

[www.mobitec.com](http://www.mobitec.com)