

TEV-Protease (recombinant)

Description:

InVivo offers a recombinant form of the **TEV-Protease** from **Tobacco Etch Virus** produced in *Escherichia coli*. TEV-Protease is a highly specific cysteine protease with **specificity for the sequence ENLYFQ↓S** (cleavage position indicated by a down arrow); however, the amino acid in the P1' position can also be G, A, M, C, or H [1].

The expression construct contains **residues 2038 to 2279** of the **TEV Genome polyprotein** (UniProt entry [P04517](#)), a natural cleavage product, called **Nuclear inclusion protein A (Nia)**, with a length of 272 amino acids. The protein includes a **C-terminal V5-tag (GKPIPPLLGLDST) and hexa-histidine-tag**.

The recombinant protein is produced with an *E. coli* expression system and purified using affinity chromatography and size exclusion chromatography.

Product-ID: RP_177

Expression System: *E. coli*

Protein Accession Number: [P04517](#)

Amino Acids: Gly2038–Gln2279, modified as mentioned above

Mutations: T17S, N68D, I77V, S219N

Tag: C-terminal V5-tag (GKPIPPLLGLDST) and 6 x His-Tag

Expected Molecular Weight: 33 kDa (*runs at 25–40 kDa on SDS-PAGE*)

Formulation: Liquid, 12.5 mM TRIS, 25 mM NaCl, 0.25 mM TCEP,
50 % Glycerol (v/v)

Concentration: ≥5 mg/ml

Recommended use:

Use 200 µL or 1 mg of TEV-Protease to cleavage 100 mg of substrate and incubate overnight. TEV-Protease is maximally active at 34 °C, but reactions can be performed at room temperature or 2–8 °C with acceptable loss of activity. TEV-Protease operates at pH values between 4–9 (ideally pH 6.0–8.5). A standard reaction buffer is 50 mM Tris-HCl, pH 8.0, 0.5 mM EDTA, 1 mM DTT. TEV protease is sensitive to high salt concentrations and loses high value of activity in the presence of 500 mM sodium chloride.

The product is for research use or for further manufacturing only.

Literature:

- [1] R.B. Kapust et al. "The P1' specificity of tobacco etch virus protease" *Biochem Biophys Res Commun.*, vol. 294, no. 5, pp. 949-55, 2002. PMID: [12074568](#)