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Biomade Innovation

Numacut TEV Protease, 6x His-Tag

The Numacut TEV protease is an improved variant of the Tobacco Etch Virus (TEV) protease with widened substrate tolerance. In comparison to the wild type enzyme, Numacut harbours various advantageous mutations. Primarily, instead of accepting the recognition sequence ENLYFQ/S or G and cleaving between Q and S/G (called P1' position), Numacut can be applied for all amino acids at P1', except proline (P). In addition, further beneficial mutations increase the specific activity, solubility and stability outperforming the wildtype enzyme significantly. The N-terminal 6x His-Tag paves the way for easy and efficient removal of the Numacut from cleavage reactions by immobilized metal-ion affinity chromatography (IMAC).

If you desire your candidate to be sequence-identical without traces, choose Numacut.

SIZE	**≥ 1,000 U**
SOURCE	**E. coli**
BIOLOGICAL ACTIVITY	**≥ 20,000 U/mL**
MOLECULAR WEIGHT	**28.2 kDa**
PURITY	**>95 % by SDS-PAGE analysis**
UNIT DEFINITION	**One Unit of Numacut TEV protease cleaves 80% of 3 µg control substrate in 1 hour at 30°C and pH 8.0.**
STORAGE	**Upon receipt, store the Numacut TEV protease at -20°C or reconstitute it by dissolving it with the provided reconstitution buffer. Upon reconstitution, the product is stable for up to one year at -20°C.**
FORMULATION	**Lyophilized from buffer (20 mM Tris/HCl buffer, 100 mM NaCl, 5 mM DTT, 1 mM EDTA, pH 7.5). No preservatives and carrier-free.**

10 Units of Numacut TEV protease are recommended for the cleavage of 1-25 µg substrate (≥ 1 mg/mL) in reaction buffer (50 mM Tris/HCl (pH 8.0), 0.5 mM EDTA and 1 mM DTT). Incubate the cleavage reaction between 30-37°C and at pH 7-8. Usually, a reaction time of 1h is sufficient for quantitative cleavage. Increase the reaction time (≤ 24h) to improve the cleavage efficiency. Avoid > 0.5 M urea or 0.5 M GuHCl, pH values below 6 and above 9, and high salt concentrations (>150 mM). Optimization of the cleavage reaction can be achieved by varying the amount of protease, reaction time and incubation temperature.

Get in touch to release the potential of your ideas!

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