# HRV3C protease

HRV3C protease is a recombinant form of the human rhinovirus 3C cysteine protease which is used to remove fusion tags from purified proteins. DNA2.0 offers vectors with a HRV3C protease recognition site (LEVLFQ/GP) between the tag and the ORF. The enzyme is GST-tagged and affinity purified.

**Catalog Number:** ENZ-02

**Amount:** 1 mg affinity purified HRV3C-GST protease in 50 mM Tris-HCl, pH 8, 150 mM NaCl, 40% glycerol, 1 mM DTT at 1 mg/ml.

**Storage:** Store at -20°C.

**Activity:** HRV3C protease at 125 ng/50 µg target protein shows 100% activity at 4°C overnight; 1 µg/50 µg target protein shows 100% activity at 4°C for 4 hours, cleavage was done in buffer with 50 mM Tris-HCl, pH 8, 100 mM NaCl, 0.5 mM EDTA, 10 mM reduced glutathione and 1 mM DTT. While HRV3C protease cleaves both on and off-column, it is more efficient in solution (off-column).

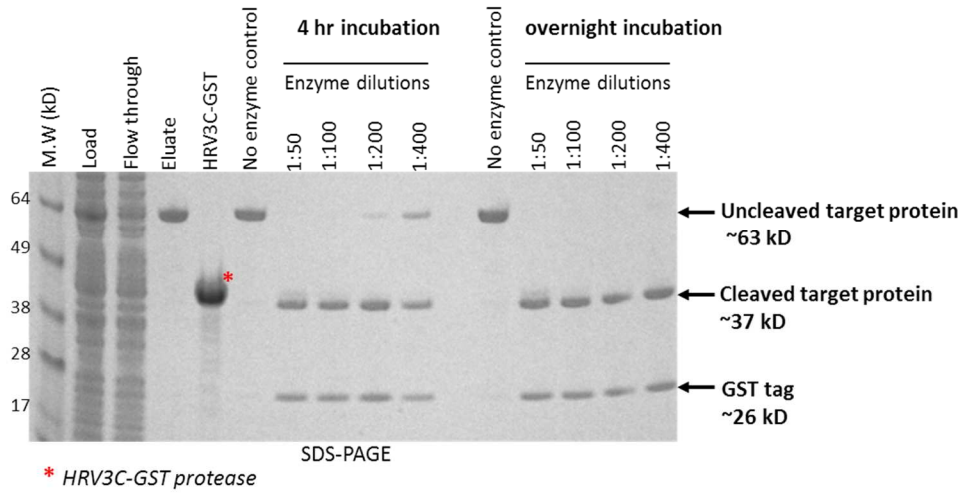


**Figure:** Cleavage of GST tag with HRV3C protease. The target protein, a RNA ligase with a HRV3C protease cleavage site (LEVLFQ/GP_PCS) and a GST tag, was purified on a Glutathione matrix. The eluted protein was incubated at 4°C for 4 hours and overnight with HRV3C-GST protease at various enzyme dilutions to determine the optimal enzyme concentration required to cleave the target. At 4 hours, a 1:100 ratio of enzyme to target protein (0.5 µg protease to 50 µg target protein) showed complete cleavage of the GST tag from the target. Complete cleavage was observed at 1:400 ratio of enzyme to target protein (125 ng protease to 50 µg of target protein).

**Physical properties:** A recombinant 47 kDa HRV3C protease construct containing a GST tag for easy removal using Glutathione (GSH) resin.

**Applications:** HRV3C protease is an efficient tool for fusion protein cleavage in solution or immobilized HRV3C protease on streptavidin-agarose. DNA2.0 vectors with HRV3C cleavage sites are catalog #s:

| Catalog # | Feature |
|---|---|
| pD441-GST | T5 promoter, N-term GST, HRV3C cleavage site |
| pD441-HMBP | T5 promoter, N-term HisMBP tag, HRV3C cleavage site |

**Intellectual Property Statement**

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