Cleavage and tag control protein, lyophilized

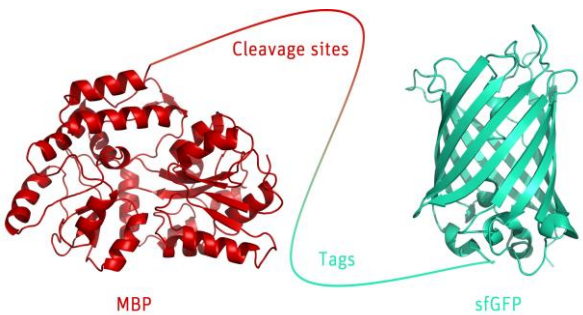
Cat. no. P2020-141

Product Information

Protein:	Cleavage and tag control protein (~ 90.5 kDa)
Source:	Recombinantly expressed in *E. coli*.
Tag(s):	Twin-Strep, HA, T7, Avi, FLAG, and His-tag; N-terminal MBP and C-terminal sfGFP fusion
Cleavage sites:	TEV, Enterokinase, Thrombin, Factor Xa, PreCission
Cleavage products:	TEV: 42.8 kDa and 47.7 kDa Enterokinase: 43.5 kDa, 20.1 kDa and 26.9 kDa Thrombin: 43.9 kDa and 46.6 kDa Factor Xa: 44.3 kDa and 46.2 kDa PreCission: 45.3 kDa and 45.3 kDa
Purification:	Purified by affinity chromatography and subsequent buffer exchange.
Formulation:	PBS; pH 7.4.
	Lyophilized, stored at -80 °C and shipped at ambient temperature. We recommend reconstituting the protein in ddH_2O. In case of 10 µg, add 11 µl ddH_2O.
Purity:	> 99 % (measured by densitometry of Coomassie stained gel, see below)
Concentration:	Will be determined by BCA-Assay.
Long-term storage:	No recommendations.

Background Information:

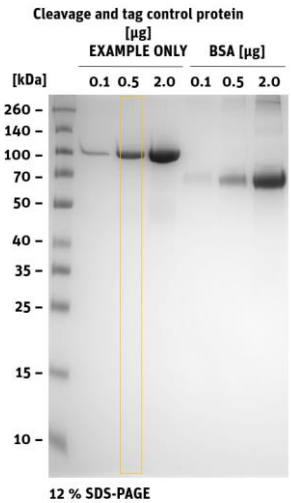
The cleavage and tag control protein is a versatile protein consisting of various cleavage sites for proteases including TEV, Enterokinase, Thrombin, Factor Xa and PreCission.
Protease cleavage results in generation of two or three fragments that have significantly reduced molecular weights, which are as follows: - TEV cleavage: 42.8 kDa and 47.7 kDa - Enterokinase: 43.5 kDa, 20.1 kDa and 26.9 kDa - Thrombin: 43.9 kDa and 46.6 kDa - Factor Xa: 44.3 kDa and 46.2 kDa - PreCission: 45.3 kDa and 45.3 kDa.
Moreover, the 90.5 kDa fusion protein is equipped with multiple tags such as Twin-Strep-, HA-, FLAG-, and His-tag, for instance, that may serve as positive control performing specific Western blot analyses or any functional assay.
Since the protein is fused to GFP, it is additionally applicable as fluorescence control.
Thus, the cleavage and tag control protein provides an excellent tool to monitor protease cleavage reactions and specific Western blot analyses as well as fluorescence experiments.



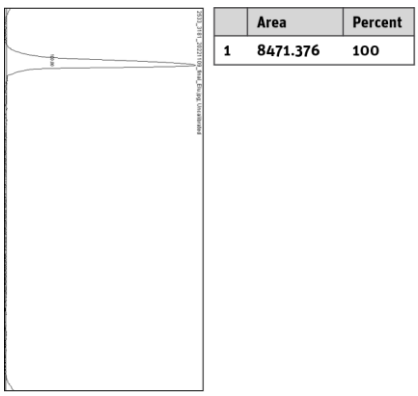
Structural model of Cleavage and tag control protein. Note that the red/green line between MBP (red) and sfGFP (green) is just a placeholder for the inserted cleavage sites and tags.

Product Information

Quality Information (provided for each lot):

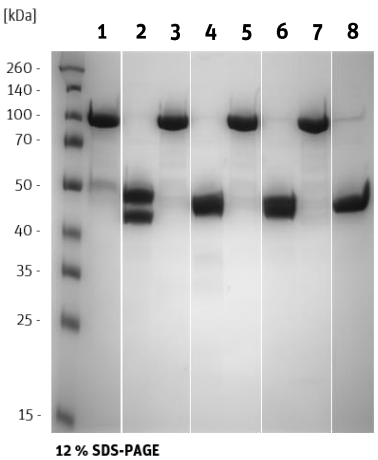


SDS-PAGE/Coll.Coomassie



Histogram (of marked lane in gel picture)

Test Cleavage



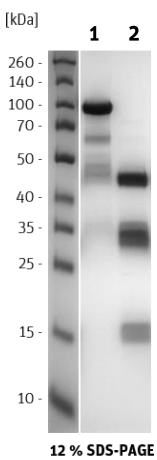
SDS-PAGE/Coll.Coomassie

a) P2020-131 (90.5 kDa) cleaved with sfTEV:
1 : Start of cleavage reaction (2.2 µl)
2 : End of cleavage reaction (2.2 µl)

b) P2020-131 (90.5 kDa) cleaved with Factor Xa:
3 : Start of cleavage reaction (2.2 µl)
4 : End of cleavage reaction (2.2 µl)

c) P2020-131 (90.5 kDa) cleaved with Thrombin:
5 : Start of cleavage reaction (2.2 µl)
6 : End of cleavage reaction (2.2 µl)

d) P2020-131 (90.5 kDa) cleaved with PreScission:
7 : Start of cleavage reaction (2.2 µl)
8 : End of cleavage reaction (2.2 µl)



SDS-PAGE/Coll.Coomassie

e) P2020-131 (90.5 kDa) cleaved with Enterokinase:
1 : Start of cleavage reaction (4.4 µl)
2 : End of cleavage reaction (4.4 µl)