

#4889 Store at -20C

## Protein Folding and Stability Antibody Sampler Kit



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1 Kit (8 x 20 microliters)

**For Research Use Only. Not for Use in Diagnostic Procedures.**

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Skp1 Antibody	2156	20 µl	19 kDa	Rabbit
Skp2 (D3G5) XP <sup>®</sup> Rabbit mAb	2652	20 µl	48 kDa	Rabbit IgG
ISG15 (22D2) Rabbit mAb	2758	20 µl	15 kDa	Rabbit IgG
NEDD8 (19E3) Rabbit mAb	2754	20 µl	9 kDa	Rabbit IgG
Ubiquitin (P4D1) Mouse mAb	3936	20 µl		Mouse IgG1
UBC3 Antibody	4997	20 µl	32 kDa	Rabbit
SUMO-1 Antibody	4930	20 µl		Rabbit
SUMO-2/3 (18H8) Rabbit mAb	4971	20 µl		Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat
Anti-mouse IgG, HRP-linked Antibody	7076	100 µl		Horse

Please visit [cellsignal.com](http://cellsignal.com) for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

### Description

This sampler kit provides an economical means to investigate protein folding and stability. The kit contains primary and secondary antibodies to perform two Western blots with each antibody.

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

### Background

The small regulatory protein ubiquitin is often covalently linked to many cellular proteins, labeling these targeted proteins for proteasome-mediated degradation. Ubiquitin is first activated by forming a thiolester complex with the E1 activation component. Activated ubiquitin is subsequently transferred to the ubiquitin-carrier protein E2, and then to an E3 ubiquitin ligase for final delivery to the ε-NH<sub>2</sub> of the target protein lysine residue (1). The ubiquitin-proteasome pathway has been implicated in a wide range of both normal biological processes and diseases (2,3).

The ubiquitin-like protein family contains three small ubiquitin-related modifier proteins (SUMO-1, -2 and -3), neural precursor cell-expressed developmentally down-regulated protein 8 (NEDD8) and interferon-stimulated 15 kDa protein (ISG15) (4-6). Their covalent attachment to target proteins is a reversible, multi-step process that is analogous to protein ubiquitination. Mature molecules are linked to the activating enzyme E1, conjugated to E2 and ligated to the target proteins by E3 (7-10). Ubiquitin is the predominant regulator for the degradation of a wide range of target proteins (8) while SUMO, NEDD8 and ISG15 modify a limited set of substrates to regulate various other biological processes (4, 11-18).

During ubiquitination, the combinatorial interaction of different E2 and E3 proteins produces variable substrate specificity (4). UBC3 and UBC3B are E2 ubiquitin-carrier proteins (19, 20). The SCF (Skp1/CUL1/F-box) E3 ubiquitin ligase protein complex is composed of three protein components, including the S phase kinase associated protein 1 (Skp1), Cullin homolog 1 (CUL1) and the Skp2 F-box protein (21-23).

### Background References

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