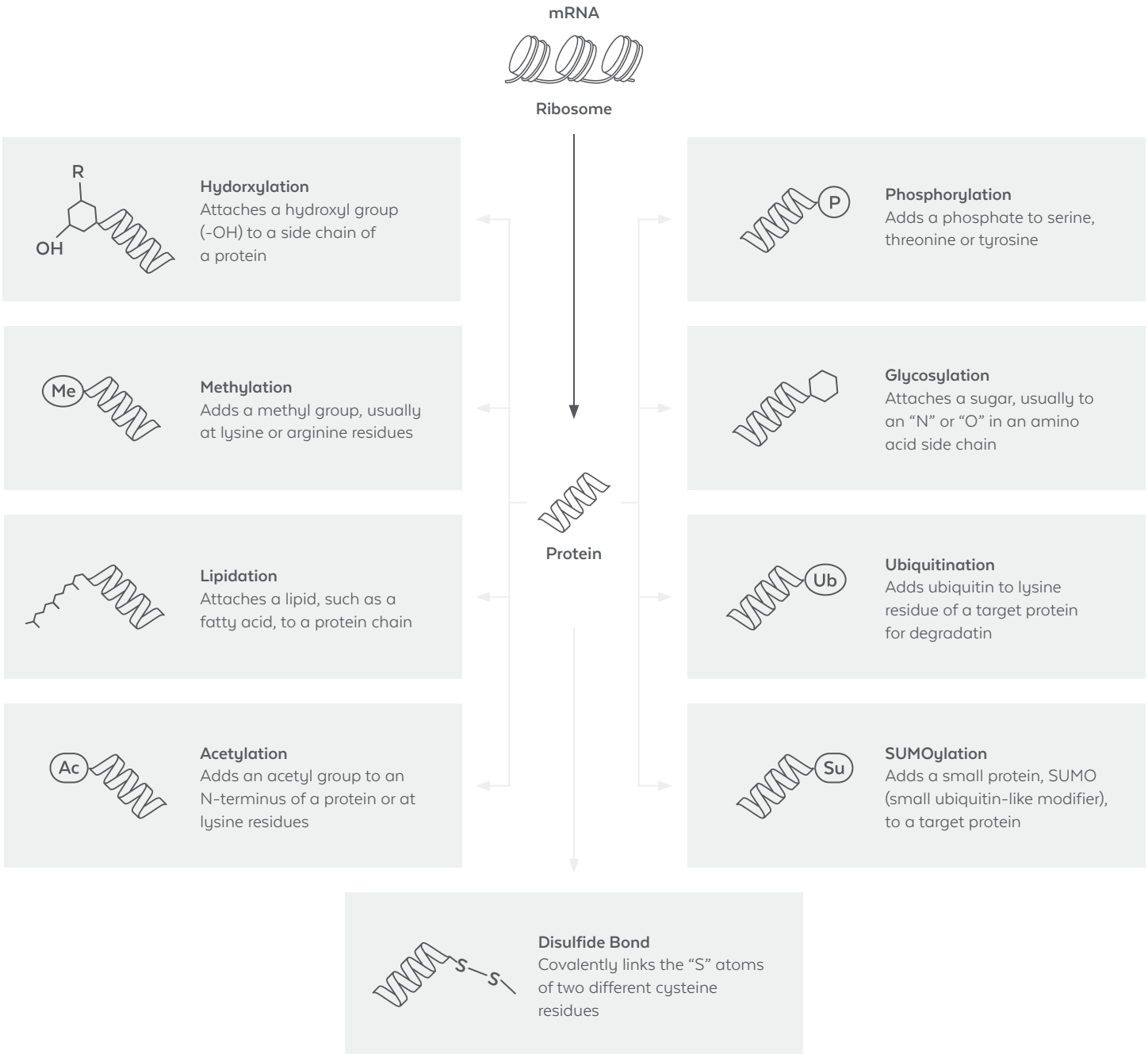
ROCKLAND

POST-TRANSLATIONAL MODIFICATION ANTIBODIES

PTM antibodies target the chemical changes on proteins, DNA, and RNA as a result of an covalent attachment. PTM antibodies can also be used to identify and purify protein-protein, protein-DNA, and/or protein-RNA complexes containing the modified protein.

Although the generation of PTM antibodies is challenging, Rockland scientists have developed proprietary methods for the development of highly-specific PTM antibodies that can be used in a wide range of *in vitro* and *in vivo* studies of a modified protein.



TIPS FOR SELECTING AN ANTIBODY TO YOUR PTM

1. Preparation

From an antibody production point of view, the differences between modified proteins can be quite small. Peptide design and immunogen quality are critical to generate a specific immune response that ensures the production of high quality antibodies.

2. Production

PTM antibodies are generated against a short, specific region of the protein, largely eliminating the issue of specificity compared to antibodies generated using large constructs as immunogens. However, it is critical that the antibody is tested against established positive and negative controls to ensure specificity for the modification.

Polyclonal antibodies can be immunodepleted during production if the sample contains antibodies that recognize other PTMs.

3. Validation

Dot blot assays or ELISAs can be used to assess both antibody specificity and sensitivity. However, in addition to being specific for the required modification, the antibody must be validated for the application of choice using appropriate positive and negative controls.

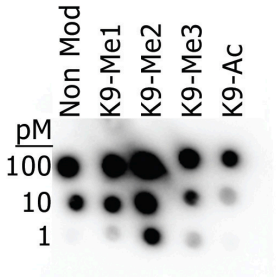


Figure 1. Antibody A shows preference towards K9Me2. This antibody shows higher reactivity towards the post translational modification, but at higher concentrations does not distinguish between non-modified and specific modification at amino acid K9.

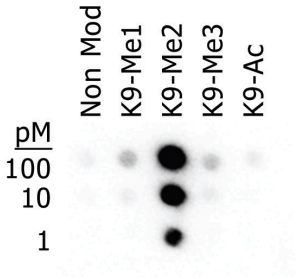


Figure 2. Antibody B (#600-401-I70) is highly specific for K9Me2. The sensitivity of antibody B goes to the low Pico-molar range. Even in high concentrations the antibody does not cross react with any other modifications of K9. Antibody B is highly specific while maintaining high sensitivity.

Product	Application	Catalog #
ATM pS1981 Antibody	ELISA, WB, IHC, IF	200-301-400
Myosin phospho S19/phospho S20 Antibody	ELISA, WB, IP, IHC	600-401-416
SMAD3 phospho S423/phospho S425 Antibody	ELISA, WB, IHC, IF, Flow	600-401-919
H3K27me3 (RABBIT) Antibody	ELISA, WB, IHC, Flow	600-401-J99
Lysine Methylated Antibody	ELISA, WB	600-401-940
Histone H3 K4me3 Antibody	ELISA, WB, IHC, IF, Flow	600-401-I59
Histone H3 K36ac Antibody	WB, IHC, IF	600-401-I89
Lysine Acetylated Antibody	ELISA, WB, IP, IHC, IF, Flow	600-401-939
Ubiquitin Antibody	ELISA, WB	200-301-G62

Products labeled for research use only. Additional reagents available such as controls, secondary antibodies, buffers, substrates, gamma globulins, and more. For a complete list of products, please visit www.rockland.com.