

Contents

Preface	v
Contributors	xiii
1 Disulfide Bond Mapping by Cyanylation-induced Cleavage and Mass Spectrometry	1
Jiang Wu	
2 Detection of Post-translational Modifications by Fluorescent Staining of Two-Dimensional Gels	21
Archana M. Jacob and Chris W. Turck	
3 Identification of Protein Phosphorylation Sites by Advanced LC-ESI-MS/MS Methods	33
Christoph Weise and Christof Lenz	
4 Analysis of Tyrosine-<i>O</i>-Sulfation	47
Jens R. Bundgaard, Jette W. Sen, Anders H. Johnsen, and Jens F. Rehfeld	
5 α-Amidated Peptides: <i>Approaches for Analysis</i>	67
Gregory P. Mueller and William J. Driscoll	
6 γ-Glutamate and β-Hydroxyaspartate in Proteins	85
Francis J. Castellino, Victoria A. Ploplis, and Li Zhang	
7 Lysine Hydroxylation and Cross-linking of Collagen	95
Mitsuo Yamauchi and Masashi Shiiba	
8 Mass Spectrometric Determination of Protein Ubiquitination	109
Carol E. Parker, Maria R. E. Warren, Viorel Mocanu, Susanna F. Greer, and Christoph H. Borchers	

9	Analysis of Sumoylation	131
	Andrea Pichler	
10	Detection and Analysis of Protein ISGylation.	139
	Tomoharu Takeuchi and Hideyoshi Yokosawa	
11	Analysis of Methylation, Acetylation, and Other Modifications in Bacterial Ribosomal Proteins.	151
	Randy J. Arnold, William Running, and James P. Reilly	
12	Analysis of S-Acylation of Proteins	163
	Michael Veit, Evgeni Ponimaskin, and Michael F. G. Schmidt	
13	Metabolic Labeling and Structural Analysis of Glycosylphosphatidylinositols from Parasitic Protozoa	183
	Nahid Azzouz, Peter Gerold, and Ralph T. Schwarz	
14	2-Dimensional Electrophoresis: <i>Detection of Glycosylation and Influence on Spot Pattern</i>	199
	Klemens Löster and Christoph Kannicht	
15	Carbohydrate Composition Analysis of Glycoproteins by HPLC Using Highly Fluorescent Anthranilic Acid (AA) Tag . . .	215
	George N. Saddic, Shirish T. Dhume, and Kalyan R. Anumula	
16	Enzymatical Hydrolysis of <i>N</i>-Glycans from Glycoproteins and Fluorescent Labeling by 2-Aminobenzamide (2-AB).	231
	Rolf Nuck	
17	Separation of <i>N</i>-Glycans by HPLC	239
	Martin Gohlke and Véronique Blanchard	
18	Enzymatic Sequence Analysis of <i>N</i>-Glycans by Exoglycosidase Cleavage and Mass Spectrometry—detection of Lewis X Structures	255
	Christoph Kannicht, Detlef Grunow, and Lothar Lucka	
19	Immunochemical Methods for the Rapid Screening of the <i>O</i>-Glycosidically Linked <i>N</i>-Acetylglucosamine Modification of Proteins	267
	Michael Ahrend, Angela Käberich, Marie-Therese Fergen, and Brigitte Schmitz	
20	Analysis of <i>O</i>-Glycosylation	281
	Juan J. Calvete and Libia Sanz	

21	Characterization of Site-specific <i>N</i>-Glycosylation	293
	Katalin F. Medzihradzsky	
22	Monitoring Glycosylation of Therapeutic Glycoproteins for Consistency by HPLC Using Highly Fluorescent Anthranilic Acid (AA) Tag	317
	Shirish T. Dhume, George N. Saddic, and Kalyan R. Anumula	
23	Comparability and Monitoring Immunogenic <i>N</i>-linked Oligosaccharides from Recombinant Monoclonal Antibodies from Two Different Cell Lines using HPLC with Fluorescence Detection and Mass Spectrometry	333
	Bruce R. Kilgore, Adam W. Lucka, Rekha Patel, Bruce A. Andrien, Jr., and Shirish T. Dhume	
24	Mass Spectrometry and HPLC with Fluorescent Detection-Based Orthogonal Approaches to Characterize <i>N</i>-linked Oligosaccharides of Recombinant Monoclonal Antibodies	347
	Adam W. Lucka, Bruce R. Kilgore, Rekha Patel, Bruce A. Andrien, Jr., and Shirish T. Dhume	
25	Web-based Computational Tools for the Prediction and Analysis of Post-translational Modifications of Proteins	363
	Vladimir A. Ivanisenko, Dmitry A. Afonnikov, and Nikolay A. Kolchanov	
	Index	385

Post-translational Modifications of Proteins

Tools for Functional Proteomics

Kannicht, C. (Ed.)

2008, XVIII, 390 p. 128 illus., Hardcover

ISBN: 978-1-58829-719-8

A product of Humana Press