



# Immunohistochemistry (IHC): *Global Markets to 2022*

August 2018

*Vijay Laxmi*

Report Code: BIO161A

# Table of Contents

<b>Chapter 1: Introduction</b> .....	<b>1</b>
Study Goals and Objectives .....	1
Definition of Immunohistochemistry .....	1
Scope of Report .....	1
Intended Audience .....	2
Research Methodology and Information Sources .....	2
Analyst's Credentials .....	6
Related BCC Research Reports .....	6
<b>Chapter 2: Summary and Highlights</b> .....	<b>8</b>
<b>Chapter 3: Market and Technology Background</b> .....	<b>12</b>
History of Immunohistochemistry .....	12
Regulations and Standards of the Immunohistochemistry Market .....	14
U.S. Food and Drug Administration .....	14
Equipment in the Immunohistochemistry Market .....	17
Raw Material Suppliers .....	17
Equipment Manufacturers .....	18
Distributors .....	18
End Users .....	18
Factors Affecting the Immunohistochemistry Equipment Market .....	19
Reagents in the Immunohistochemistry Market .....	19
Raw Material Suppliers .....	19
Reagent Manufacturers .....	20
Distributors .....	20
End Users .....	21
Factors Affecting the Immunohistochemistry Reagent Market .....	21
Antibodies in the Immunohistochemistry Market .....	21
Manufacturers of Antibodies Used in the Immunohistochemistry Market .....	21
Segmentation by Product .....	22
Antibodies .....	23
Equipment .....	24
Reagents .....	26
Segmentation by Application .....	28
Diagnostics .....	29
Drug Testing .....	30
Segmentation by End User .....	31
Hospital and Diagnostics Laboratories .....	32
Research Institutes .....	32
Other (Contract Research Organization and Forensic Laboratories) .....	32
Segmentation by Region .....	33
North America .....	34
Europe .....	34
Asia-Pacific .....	35
South America .....	35
Rest of the World .....	36
<b>Chapter 4: Market Breakdown by Product</b> .....	<b>38</b>
Antibodies .....	40

Primary Antibodies .....	44
Secondary Antibodies .....	46
Equipment.....	48
Slide Staining Systems.....	50
Tissue Microarrays.....	53
Tissue Processing Systems.....	56
Slide Scanners.....	58
Other Equipment (Microtome, Water Bath, pH Meter, etc.).....	61
Reagents .....	65
Histological Stains .....	68
Blocking Sera and Reagents.....	70
Chromogenic Substrates .....	72
Fixation Reagents.....	74
Stabilizers .....	76
Organic Solvents .....	77
Proteolytic Enzymes.....	79
Diluents .....	80
Kits.....	82
<b>Chapter 5: Market Breakdown by Application .....</b>	<b>87</b>
Diagnostics.....	89
The Process of Immunohistochemistry in Diagnoses .....	90
Cancer Diagnostics.....	91
Infectious Diseases.....	94
Cardiovascular Disease.....	97
Autoimmune Diseases .....	99
Diabetes Mellitus .....	102
Nephrological Diseases .....	105
Drug Testing.....	108
<b>Chapter 6: Market Breakdown by End User .....</b>	<b>113</b>
Hospitals and Diagnostic Laboratories .....	115
Research Institutes .....	117
Other End Users .....	119
<b>Chapter 7: Market Breakdown by Region .....</b>	<b>123</b>
North America.....	123
United States.....	123
Canada.....	125
Europe .....	129
United Kingdom .....	129
France.....	132
Germany.....	134
Spain.....	136
Rest of Europe .....	136
Asia-Pacific .....	137
China .....	137
India .....	140
Japan .....	142
Australia .....	143
Rest of Asia-Pacific .....	151

Latin America .....	152
Brazil.....	152
Mexico.....	153
Argentina.....	155
Chile .....	157
Cuba .....	158
Middle East and Africa .....	159
<b>Chapter 8: Market Drivers .....</b>	<b>162</b>
Impact Analysis .....	162
Growing Prevalence of Cancer .....	162
Rapidly Increasing Geriatric Population .....	165
Rapid Technological Developments in the IVD Industry .....	167
Increasing Healthcare Spending .....	168
<b>Chapter 9: Company Profiles and Vendor Landscape .....</b>	<b>172</b>
<b>About BCC Research .....</b>	<b>197</b>
About BCC Research .....	198
BCC Membership.....	198
BCC Custom Research.....	198

# List of Tables

Summary Table Global Immunohistochemistry Market, by Product, Through 2022 (\$ Millions) .....	9
Table 1 Immunohistochemistry Laboratory Standards and Regulations .....	16
Table 2 U.S. Centers for Disease Control Biosafety Regulations .....	16
Table 3 Antibody Manufacturers and Products Available in the Global Immunohistochemistry Market .	21
Table 4 Global Immunohistochemistry Market, by Product, Through 2022 (\$ Millions) .....	39
Table 5 Global Immunohistochemistry Market, by Antibodies, Through 2022 (\$ Millions) .....	41
Table 6 Diabetes Incidence in the Top 10 Countries, 2016 (Millions) .....	42
Table 7 Global Antibodies Market, by Region, Through 2022 (\$ Millions) .....	44
Table 8 Global Primary Antibodies Market, by Region, Through 2022 (\$ Millions) .....	45
Table 9 Examples of Clinically Important Monoclonal Antibodies .....	46
Table 10 Secondary Antibody Selection .....	47
Table 11 Global Secondary Antibodies Market, by Region, Through 2022 (\$ Millions) .....	47
Table 12 Global Immunohistochemistry Market, by Equipment, Through 2022 (\$ Millions) .....	49
Table 13 Global Immunohistochemistry Equipment Market, by Region, Through 2022 (\$ Millions).....	49
Table 14 Global Slide Staining Systems Market, by Region, Through 2022 (\$ Millions) .....	52
Table 15 Estimated Number of U.S. Cancer Survivors, by Sex and Survival Years, as of Jan. 1, 2016 .....	54
Table 16 Global Tissue Microarrays Market, by Region, Through 2022 (\$ Millions) .....	56
Table 17 Healthcare Spending by Different Income Level Countries, 2040 (\$) .....	57
Spending .....	57
Table 18 Global Tissue Processing Systems Market, by Region, Through 2022 (\$ Millions) .....	58
Table 19 Global Slide Scanners Market, by Region, Through 2022 (\$ Millions) .....	61
Table 20 Global Other Equipment Market, by Region, Through 2022 (\$ Millions).....	65
Table 21 Global Immunohistochemistry Market, by Reagent, Through 2022 (\$ Millions) .....	66
Table 22 Global Reagents Market, by Region, Through 2022 (\$ Millions) .....	67
Table 23 Global Histological Stains Market, by Region, Through 2022 (\$ Millions).....	68
Table 24 Categories of Histological Stains .....	70
Table 25 Global Blocking Sera and Reagents Market, by Region, Through 2022 (\$ Millions) .....	72
Table 26 Global Chromogenic Substrates Market, by Region, Through 2022 (\$ Millions).....	74
Table 27 Global Fixation Reagents Market, by Region, Through 2022 (\$ Millions) .....	75
Table 28 Most Common Fixatives and Their General Target Antigens .....	76
Table 29 Global Stabilizers Market, by Region, Through 2022 (\$ Millions) .....	77
Table 30 The Most Common Causes of Cancer Death, 2015 (Number).....	78
Table 31 Global Organic Solvents Market, by Region, Through 2022 (\$ Millions).....	79
Table 32 Global Proteolytic Enzymes Market, by Region, Through 2022 (\$ Millions) .....	80
Table 33 Global Diluents Market, by Region, Through 2022 (\$ Millions).....	82
Table 34 Kit Components for Immunohistochemistry Optimization .....	83
Table 35 Global IHC Kits Market, by Region, Through 2022 (\$ Millions).....	85
Table 36 Global Immunohistochemistry Market, by Application, Through 2022 (\$ Millions).....	88
Table 37 Global Immunohistochemistry Diagnostics Market, by Application, Through 2022 (\$ Millions)	90
Table 38 Global Immunohistochemistry Diagnostics Market, by Region, Through 2022 (\$ Millions) .....	91
Table 39 Global Cancer Diagnostics Market, by Region, Through 2022 (\$ Millions) .....	94
Table 40 Global Immunohistochemistry Infectious Disease Applications Market, by Region, Through 2022 (\$ Millions).....	96
Table 41 Global Immunohistochemistry Cardiovascular Disease Applications Market, by Region, Through 2022 (\$ Millions).....	99
Table 42 Selected Infectious Etiologies of Autoimmune Diseases .....	100

Table 43 Global Immunohistochemistry Autoimmune Disease Applications Market, by Region, Through 2022 (\$ Millions).....	102
Table 44 Diabetes Incidence in the Top 10 Countries, 2016 (Millions) .....	103
Table 45 Global Immunohistochemistry Diabetes Mellitus Applications Market, by Region, Through 2022 (\$ Millions) .....	105
Table 46 Global Immunohistochemistry Nephrological Disease Applications Market, by Region, Through 2022 (\$ Millions).....	108
Table 47 Global Immunohistochemistry Drug Testing Applications Market, by Region, Through 2022 (\$ Millions) .....	111
Table 48 Global Immunohistochemistry Market, by End User, Through 2022 (\$ Millions) .....	113
Table 49 Global Immunohistochemistry Hospital and Diagnostic Laboratory Applications Market, by Region, Through 2022 (\$ Millions) .....	116
Table 50 Various Cancer Research Studies .....	118
Table 51 Global Immunohistochemistry Research Institute Applications Market, by Region, Through 2022 (\$ Millions).....	119
Table 52 Uses of Immunohistochemistry in Forensic Pathology .....	120
Table 53 Global Immunohistochemistry Other End User Applications Market, by Region, Through 2022 (\$ Millions) .....	121
Table 54 Global Immunohistochemistry Market, by Region, Through 2022 (\$ Millions).....	123
Table 55 Grants by Type of Cancer, 2017 (\$ Thousands) .....	124
Table 56 Estimated New Cancer Cases in Males in Canada, 2017 (%) .....	126
Table 57 Estimated New Cancer Cases in Females in Canada, 2017 (%).....	128
Table 58 Deaths from CVD and Number of People Living with CVD in the U.K., 2017 .....	130
Table 59 Death Rate Due to Cardiovascular Diseases in the U.K., 2017 (per 100,000 Population).....	130
Table 60 Deaths Caused by Cardiovascular Disease Compared with Other Causes of Death in Germany, 2016 (%).....	135
Table 61 Diseases Causing the Greatest Number of Premature Deaths in Germany, Percentage Change from 2005-2016 .....	136
Table 62 Cancer Incidence Rates in Asia-Pacific, 2016 (per 100,000).....	138
Table 63 Mortality Rates in Asia-Pacific, by Cancer Type, 2016 (per 100,000).....	139
Table 64 Top Five Types Cancer in Men and Women in India, 2017 .....	142
Table 65 Estimated Incidence of All Cancers in Australia, by Sex, 2017 (Number/%) .....	143
Table 66 Estimated 20 Most Commonly Diagnosed Cancers in Males in Australia, 2017 (per 100,000). 145	
Table 67 Estimated 20 Most Commonly Diagnosed Cancers in Females in Australia, 2017 (per 100,000) .....	146
Table 68 10 Most Common Cancers in Australia Considering Principal Diagnosis, 2014–2015 (Number/%) .....	148
Table 69 Estimated 10 Most Common Causes of Death from Cancer in Males in Australia, 2017 (per 100,000).....	149
Table 70 Estimated 10 Most Common Causes of Death from Cancer in Females in Australia, 2017 (per 100,000).....	150
Table 71 Percentage of Population in Brazil, Age 60 and Above (Thousands/%) .....	152
Table 72 Top 10 Causes of Death in Mexico and Percentage Increase from 2005–2016 (%) .....	153
Table 73 Top 10 Causes of Death in Argentina and Percentage Change, 2005-2016 (%) .....	156
Table 74 Top 10 Causes of Death in Cuba and Percentage Change, 2005-2016 .....	158
Table 75 Impact Analysis of Market Drivers .....	162
Table 76 Cancer Markers Used in the Diagnosis and Treatment of Different Types of Cancer.....	163
Table 77 Global Population Aged 60 Years and Above, by Region (Millions/%).....	165
Table 78 Global Population Aged 80 Years and Above, by Region (Millions/%) .....	166
Table 79 Countries with the Highest Elderly Populations, 2015 and 2030 (%).....	167
Table 80 Abbott Laboratories: Product Portfolio .....	172

Table 81 Abcam: Product Portfolio .....	173
Table 82 Abcam Recent Developments, 2015-2018 .....	173
Table 83 Abnova: Product Portfolio .....	174
Table 84 Agilent Technologies Inc.: Product Portfolio .....	175
Table 85 Agilent Technologies Inc. Recent Developments, 2015-2018 .....	175
Table 86 Arrayit Corp.: Product Portfolio .....	176
Table 87 Arrayit Corp. Recent Developments, 2015-2018 .....	176
Table 88 Bio SB: Product Portfolio .....	177
Table 89 Bio SB Recent Developments, 2015-2018 .....	177
Table 90 Biocare Medical: Product Portfolio .....	178
Table 91 Biocare Medical Recent Developments, 2015-2018 .....	178
Table 92 Biogenex: Product Portfolio .....	179
Table 93 Biogenex Recent Developments, 2015-2018.....	179
Table 94 BioLegend: Product Portfolio .....	180
Table 95 Bio-Rad Laboratories Inc.: Product Portfolio .....	181
Table 96 Candor Bioscience Gmbh: Product Portfolio .....	181
Table 97 Cell Marque Corp.: Product Portfolio .....	182
Table 98 Cell Signaling Technology Inc.: Product Portfolio .....	183
Table 99 Cell Signaling Technology Inc. Recent Developments, 2015-2018 .....	183
Table 100 Danaher Corp.: Product Portfolio.....	184
Table 101 Danaher Corp. Recent Developments, 2015-2018.....	184
Table 102 Diagnostic Biosystems Inc.: Product Portfolio .....	185
Table 103 F. Hoffmann-La Roche Ag: Product Portfolio .....	185
Table 104 F. Hoffmann-La Roche Ag Recent Developments, 2015-2018.....	186
Table 105 Histologix: Product Portfolio .....	186
Table 106 Immunologic: Product Portfolio .....	187
Table 107 LSBio: Product Portfolio.....	188
Table 108 Merck Millipore: Product Portfolio .....	188
Table 109 NovodiAx: Product Portfolio .....	189
Table 110 NovodiAx Recent Developments, 2015-2018 .....	189
Table 111 PeproTech Gmbh: Product Portfolio .....	190
Table 112 PerkinElmer Inc.: Product Portfolio.....	191
Table 113 Rockland Immunochemicals: Product Portfolio.....	191
Table 114 Sakura Finetek Usa Inc.: Product Portfolio .....	192
Table 115 Sakura Finetek Usa Inc. Recent Developments, 2015-2018 .....	193
Table 116 Siemens AG Healthcare: Product Portfolio .....	194
Table 117 Thermo Fisher Scientific Inc.: Product Portfolio .....	195
Table 118 Thermo Fisher Scientific Inc. Recent Developments, 2015-2018 .....	195
Table 119 Vector Laboratories: Product Portfolio .....	196
Table 120 Vector Laboratories Recent Developments, 2015-2018 .....	196

# List of Figures

Summary Figure Global Immunohistochemistry Market, by Product, 2016-2022 (\$ Millions) .....	9
Figure 1 Outline of The Steps Needed to Localize Antigens in IHC Testing .....	12
Figure 2 Immunohistochemistry Timeline .....	14
Figure 3 Immunohistochemistry Test Procedure .....	22
Figure 4 Global Immunohistochemistry Market Shares, by Product, 2016 and 2022 (%) .....	23
Figure 5 Phases of Histological Staining .....	26
Figure 6 Global Immunohistochemistry Market Shares, by Application, 2016 and 2022 (%) .....	28
Figure 7 Global Immunohistochemistry Market Shares, by End User, 2016 and 2022 (%) .....	31
Figure 8 Global Immunohistochemistry Market Shares, by Region, 2016 and 2022 (%) .....	33
Figure 9 Global Immunohistochemistry Market Shares, by Product, 2016 and 2022 (%) .....	39
Figure 10 Number of Cancer Cases Worldwide, 2012 and 2030 (Millions) .....	48
Figure 11 Number of People with Chronic Conditions in the United States, 2010-2025 (Millions) .....	51
Figure 12 Percentage Distribution of Population Aged 65 and Over, by Region, 2015 and 2050 (%) .....	59
Figure 13 Global Immunohistochemistry Market Share, by Service, 2016 (%) .....	62
Figure 14 Number of New TB Cases, 2016 (%).....	64
Figure 15 New HIV Diagnoses in the United States, by Age, 2016 (Number of Cases) .....	73
Figure 16 Estimated Number of Colon Cancer Cases in the U.S, 2017 and 2018 .....	84
Figure 17 Global Immunohistochemistry Market Shares, by Application, 2016 and 2022 (%) .....	88
Figure 18 Global Prevalence of Colon Cancer, by Age, 2016 (per 100,000 Population) .....	93
Figure 19 New Global HIV Infections, by Region, 2016 (Millions).....	95
Figure 20 Healthcare Expenditures Across the Globe, 2014-2016 (% of GDP) .....	98
Figure 21 Healthcare Cost Comparison of Autoimmune Diseases and Cancer, 2015 (\$ Billions).....	101
Figure 22 Global Prevalence of Diabetes, by Age Group and Region (Millions) .....	104
Figure 23 Global Prevalence of Chronic Kidney Diseases, by Age (%).....	106
Figure 24 Global Development of Medicines, by Disease Type (Number) .....	109
Figure 25 Global Share of R&D Spending on Drug Testing, by Region, 2016 (%).....	110
Figure 26 Global Immunohistochemistry Market Shares, by End User, 2016 and 2022 (%).....	114
Figure 27 Global Incidence of Patients with Chronic Diseases, 2005-2030 (Millions) .....	116
Figure 28 New Cases of Cancer in France, 2015 (%) .....	132
Figure 29 Health Spending and Financing in France, 2005-2015 (% of GDP) .....	133
Figure 30 Market Demand for Medical Equipment in France, 2015-2017 (\$ Billions).....	134
Figure 31 Healthcare Spending in Mexico, 2014 and 2040 (\$ Billions) .....	154
Figure 32 Healthcare Spending in Argentina, 2014 and 2040 (\$ Billions) .....	155
Figure 33 Healthcare Expenditures and Financing in Chili, 2005-2016 (% of GDP) .....	157
Figure 34 Healthcare Spending in Cuba, 2014 and 2040 (\$ Billions).....	159
Figure 35 Global GDP Shares of Healthcare Expenditures and Financing, by Country 2010-2016 (%)....	169





*About BCC Research*

## *About BCC Research*

With our unparalleled 45-year history, BCC Research provides comprehensive analysis of global market sizing, forecasting and industry intelligence, covering markets where advances in science and technology are improving the quality, standard and sustainability of businesses, economies and lives.

## *BCC Membership*

From market sizing and forecasts, to opportunity assessments and competitive analyses, our ever-expanding library gives you the data, insights and intelligence required to ensure your project is a success. Members benefit from ongoing, unlimited access to the category or collections of their choice, and most membership packages pay for themselves within two to three reports being accessed.

Did you buy this report? You may qualify to apply your purchase price towards a full membership. Call 866/285-7215 or email [info@bccresearch.com](mailto:info@bccresearch.com) to request a demo.

## *BCC Custom Research*

Our experts provide custom research projects to those working to identify new markets, introduce new products, validate existing market share, analyze competition and assess the potential for products to impact existing markets. With impressive academic credentials and broad and deep knowledge of global industrial markets, our independent analysts and consultants develop the facts, figures, analysis and assessments to inform the decisions that will move your company ahead. Confidential inquiries to: [custom@bccresearch.com](mailto:custom@bccresearch.com) or 781-205-2429.

## DISCLAIMER

The information developed in this report is intended to be as reliable as possible at the time of publication and is of a professional nature. This information does not constitute managerial, legal or accounting advice, nor should it be considered as a corporate policy guide, laboratory manual or an endorsement of any product, as much of the information is speculative in nature. BCC Research and the author assume no responsibility for any loss or damage that might result from reliance on the reported information or from its use.

ISBN: 978-1-62296-794-0  
August 2018