



**Bureau of Laboratory Quality Standards
Ministry of Public Health**

This is to certify that

The laboratory of

**Division of Microbiology,
King Chulalongkorn Memorial Hospital**

**1873 Rama 4 Road, Pathumwan District,
Bangkok 10330, Thailand**

has been accepted as an
accredited laboratory complying with the ISO 15189 : 2012
and the requirements of the Bureau of Laboratory Quality Standards

The laboratory has been accredited for specific tests
listed in the scope within the field of

Medical Laboratory

Patravee Soisangwan
(Dr. Patravee Soisangwan)

Director of Bureau of Laboratory Quality Standards

Date of Accreditation : 10 July 2019

Valid Until : 9 July 2021

Accreditation Number 4112/55



**Bureau of Laboratory Quality Standards
Ministry of Public Health**

This is to certify that

The laboratory of

**Division of Microbiology,
King Chulalongkorn Memorial Hospital**

**1873 Rama 4 Road, Pathumwan District,
Bangkok 10330, Thailand**

has been accepted as an
accredited laboratory complying with the ISO 15190 : 2003
and the requirements of the Bureau of Laboratory Quality Standards
within the field of

Medical Laboratory Safety

Patavee Soisangwan
(Dr. Patavee Soisangwan)

Director of Bureau of Laboratory Quality Standards

Date of Accreditation : 10 July 2019

Valid Until : 9 July 2021

Accreditation Number 4112/55

**The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital
has been accepted as an accredited laboratory in the field of Medical Laboratory for the
following scope**

No.	Type of Sample	Test	Method
Laboratory of Bacteriology			
1.	CSF, Urine, Sputum, Stool & Rectal Swab, Throat Swab, Urethral Swab, Vaginal, Cervical Swab, Endotracheal Aspirate, Nasopharyngeal Swab, Ear Swab, Eye Swab, Nose Swab, Conjunctiva, Corneal Scrap, Pus Swab, Catheter Tip, Body Fluids and Isolated Colony	Aerobic culture with AST (MB001)	<ul style="list-style-type: none"> - Culture - Isolation - Identification (Biochemical Test: Conventional And Commercial Kit using VITEK®2 and VITEK® MS) - Serology Test - Disk Diffusion Test - E-Test
2.	CSF, Urine, Sputum, Urethral Swab, Vaginal Swab, Cervical Swab, Endotracheal Aspirate, Ear Swab, Eye Swab, Conjunctival Scrap, Cornea Scrap, Body Fluids And Pus Swab	Gram Stain (MB015)	<ul style="list-style-type: none"> - Gram Stain - Microscopic Examination

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital has been accepted as an accredited laboratory in the field of Medical Laboratory for the following scope

No.	Type of Sample	Test	Method
3.	Blood	Blood Culture: Aerobic Bacteria (MB059)	<ul style="list-style-type: none"> - Culture using BD BACTEC™ Blood Culture - Isolation - Identification (Biochemical Test: Conventional and Commercial Kit using VITEK®2 and VITEK® MS) - Serology Test - Disk Diffusion Test - E-Test
4.	Aerobic bacteria pure culture	Special identification for bacteria (MB022)	<ul style="list-style-type: none"> - Culture - Isolation - Identification (Biochemical Test: Conventional and Commercial Kit using VITEK®2 and VITEK® MS) - Serology Test
5.	Serum	<i>C. pneumoniae</i> IgG Ab (MB 010)	Micro-Immuno Fluorescence Assay (MIF)

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital has been accepted as an accredited laboratory in the field of Medical Laboratory for the following scope

No.	Type of Sample	Test	Method
6.	Serum	<i>C. pneumoniae</i> IgM Ab (MB 011)	Micro-Immuno Fluorescence Assay (MIF)
Laboratory of Anaerobe			
7.	Stool	<i>Clostridium difficile</i> toxin A&B (MB013)	Enzyme Linked Fluorescent Assay (ELFA)
8.	Blood, Bone Marrow, Bile, Bladder Urine, Suprapubic Aspirate, CSF, Pericardial, Peritoneal, Pleural, Deep Bronchial Secretion, Joint Fluid, Synovial Fluid, Tissue Biopsy	Anaerobic Culture (MB005)	-Anaerobic culture - Isolation -Identification (conventional method and Commercial Kit using VITEK®2 and VITEK® MS) -MIC
Laboratory of Molecular Bacteriology			
9.	1. Respiratory Secretion: Sputum, Bronchoalveolar Lavage (BAL), Endotracheal Suction 2. Blood, Bone Marrow Aspirate	PCR for <i>Mycobacterium tuberculosis</i> complex (MB020)	1. In-house PCR based on - J Med Assoc Thai 1996; 79 Suppl.1: S113-S118 - J Med Assoc Thai 2002; 85:321-326 - Chula Med J 2002; 46(8)

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital
has been accepted as an accredited laboratory in the field of Medical Laboratory for the
following scope

No.	Type of Sample	Test	Method
	3. Body Fluid: Pleural Fluid, CSF, Pericardial Effusion 4. Pus 5. Tissue: Fresh Tissue, Paraffin-Embedded Tissue 6. Urine 7. Feces		: 619-629 -Asian Biomedicine 2010; 4(5):787-792 - Method validation of PCR for TB diagnosis. Diagnostic Molecular Bacteriology laboratory, Department of Microbiology 2. Real-Time PCR: Anyplex MTB/ NTM Real-Time Detection
Laboratory of Mycobacteriology			
10.	Blood, CSF, Urine, Sputum, Stool, Urethral Swab, Vaginal Swab, Cervical Swab, Endotracheal Aspirate, Ear Swab, Eye Swab, Nose Swab, Conjunctival Scrap, Cornea Scrap, Body Fluids and Pus Swab	Acid Fast Bacilli Stain (MB004)	Acid Fast Stain by Kinyoun
11.	CSF, Urine, Sputum, Urethral Swab, Vaginal Swab, Cervical	<i>Mycobacterium</i> culture and AST (Automate : I,R,S,E) (MB002)	- Culture - Isolation

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital has been accepted as an accredited laboratory in the field of Medical Laboratory for the following scope

No.	Type of Sample	Test	Method
	Swab, Endotracheal Aspirate, Ear Swab, Eye Swab, Nose Swab, Conjunctival Scrap, Cornea Scrap, Body Fluids, Pus Swab		<ul style="list-style-type: none"> - Identification: <ul style="list-style-type: none"> - Biochemical Test - Immunochromatography Techniques - Reverse-Hybridization Techniques - Antimicrobial Susceptibility Test for <i>Mycobacterium tuberculosis</i> using BACTEC MGIT 960 System
12.	Blood, body fluid in Myco/Flytic culture vial	<i>Mycobacterium</i> culture: Blood, body fluid (MB029)	<ul style="list-style-type: none"> - Culture - Isolation using BACTEC 9240 System and Solid Culture Method - Identification: <ul style="list-style-type: none"> - Biochemical Test - Immunochromatography Techniques - Reverse-Hybridization Techniques - Antituberculous Susceptibility Testing using BACTEC MGIT 960 System

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital has been accepted as an accredited laboratory in the field of Medical Laboratory for the following scope

No.	Type of Sample	Test	Method
13.	Isolated organism (Positive for AFB Stain)	Identification of Mycobacterium species (Line probe assay) (MB068)	Reverse Hybridization Technique
14.	Isolated organism MTBC Positive MGIT tube	MTBC : AST (Automate: I,R,S,E) (MB072)	Antimycobacterial Susceptibility Testing using BACTEC MGIT 960 System
15.	Isolated organism MTBC Positive MGIT tube	MTBC : AST (Automate: Z) (MB074)	Antimicrobial Susceptibility Test for Mycobacterium tuberculosis using BACTEC MGIT 960 System
Laboratory of Mycology			
16.	CSF, Sputum, Urine, Cornea Scraping, Pus, Endotracheal Aspirate, Body Fluids, Smeared Slide	India Ink Preparation (MF005)	Direct Wet Mount
17.	Sputum, Urine, Vaginal Swab, Cervical Swab, Endotracheal Aspirate, Ear Swab, Eye Swab, Body Fluids, Pus, Smeared Slide	KOH Preparation (MF006)	Direct Wet Mount

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital
has been accepted as an accredited laboratory in the field of Medical Laboratory for the
following scope

No.	Type of Sample	Test	Method
Laboratory of Virology			
18.	Clotted Blood, Serum	CMV IgG (MV001)	Enzyme linked Immunosorbent Assay : EUROIMMUN I-2P
19.	Clotted Blood, Serum	CMV IgM (MV002)	Enzyme linked Immunosorbent Assay : EUROIMMUN I-2P
20.	Clotted Blood, Serum	HSV IgG (MV007)	Enzyme linked Immunosorbent Assay : EUROIMMUN I-2P
21.	Clotted Blood, Serum	HSV IgM (MV008)	Enzyme linked Immunosorbent Assay : EUROIMMUN I-2P
22.	Clotted Blood, Serum	Rubella IgG (MV010)	Enzyme linked Immunosorbent Assay : EUROIMMUN I-2P
23.	Clotted Blood, Serum	Rubella IgM (MV011)	Enzyme linked Immunosorbent Assay : EUROIMMUN I-2P
24.	Clotted Blood, Serum	Measles IgG (MV032)	Enzyme linked Immunosorbent Assay : EUROIMMUN I-2P
25.	Clotted Blood, Serum	Measles IgM (MV033)	Enzyme linked Immunosorbent Assay: EUROIMMUN I-2P

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital
has been accepted as an accredited laboratory in the field of Medical Laboratory for the
following scope

No.	Type of Sample	Test	Method
26.	Clotted Blood, Serum	Mumps IgG (MV070)	Enzyme linked Immunosorbent Assay : EUROIMMUN I-2P
27.	Clotted Blood, Serum	Mumps IgM (MV071)	Enzyme linked Immunosorbent Assay : EUROIMMUN I-2P
28.	Clotted Blood, Serum	VZV IgG (MV030)	Enzyme linked Immunosorbent Assay : EUROIMMUN I-2P
29.	Clotted Blood, Serum	VZV IgM (MV031)	Enzyme linked Immunosorbent Assay : EUROIMMUN I-2P
30.	Clotted Blood, Serum	EBV Ab IgG (MV005)	Enzyme linked Immunosorbent Assay : EUROIMMUN I-2P
31.	Clotted Blood, Serum	EBV Ab IgM (MV006)	Enzyme linked Immunosorbent Assay : EUROIMMUN I-2P
32.	Clotted Blood, Serum	EBV (EBNA) IgG (MV051)	Enzyme linked Immunosorbent Assay : EUROIMMUN I-2P
33.	Clotted Blood, Serum	Parvovirus B19 IgG (MV025)	Enzyme linked Immunosorbent Assay : EUROIMMUN I-2P

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital has been accepted as an accredited laboratory in the field of Medical Laboratory for the following scope

No.	Type of Sample	Test	Method
34.	Clotted Blood, Serum	Parvovirus B19 IgM (MV026)	Enzyme linked Immunosorbent Assay : EUROIMMUN I-2P
35.	Clotted Blood, Serum	Dengue IgG (MV068)	Enzyme linked Immunosorbent Assay : PANBIO
36.	Clotted Blood, Serum	Dengue IgM (MV092)	Enzyme linked Immunosorbent Assay : PANBIO
37.	Plasma	HIV Viral Load (MV035)	Polymerase Chain Reaction (PCR) : Abbott 2000sp, COBAS Ampliprep/COBAS Taqman
38.	Plasma	HBV Viral Load (MV037)	Polymerase Chain Reaction (PCR) : Abbott 2000sp, COBAS Ampliprep/COBAS Taqman
39.	Plasma	HCV Viral Load (MV039)	Polymerase Chain Reaction (PCR) : Abbott 2000sp, COBAS Ampliprep/COBAS Taqman
40.	Plasma	CMV Viral Load (MV041)	Polymerase Chain Reaction (PCR): Abbott 2000sp, Abbott24sp, COBAS Ampliprep/COBAS Taqman

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital
has been accepted as an accredited laboratory in the field of Medical Laboratory for the
following scope

No.	Type of Sample	Test	Method
41.	Plasma/CSF	EBV Viral Load (MV066)	Polymerase Chain Reaction (PCR): QIAasympy
42.	Plasma/Body Fluid	CMV-DNA (Qualitative) (MV042)	Polymerase Chain Reaction (PCR) :LightCycler2.0, Biorad CFX96
43.	Plasma/Body Fluid	VZV-DNA (Qualitative) (MV069)	Polymerase Chain Reaction (PCR) :LightCycler2.0, Biorad CFX96
44.	Plasma/Body Fluid	HSV-DNA (Qualitative) (MV052)	Polymerase Chain Reaction (PCR) : LightCycler2.0, Biorad CFX96
45.	Nasopharyngeal Swab/ Suction	Influenza A/B/RSV (MV081)	Polymerase Chain Reaction (PCR) : 3M Simplexa Flu A/B/RSV
46.	Nasopharyngeal Swab/ Suction	Respiratory Virus 19 Subtypes (MV082)	Multiplex polymerase chain reaction and bead hybridization: Luminex MAGPIX
47.	Plasma/Body fluid/ Urine	HSV 1-8 and Enterovirus (CLART ENTHERPEX) (MV083)	1. Polymerase Chain Reaction (PCR) and DNA Microarray 2. Multiplex polymerase chain reaction and hybridization (DNA microarray): GENOMICA

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital has been accepted as an accredited laboratory in the field of Medical Laboratory for the following scope

No.	Type of Sample	Test	Method
Laboratory of Immunology			
48.	Serum, Plasma	CA19-9 (MI015)	1. Electrochemiluminescence Immunoassay (ECLIA): Modular E170 Analyzer 2. Electrochemiluminescence Immunoassay (ECLIA): Modular e411 Analyzer 3. Electrochemiluminescence Immunoassay (ECLIA): cobas 8000, Roche
49.	Serum, Plasma, Amniotic Fluid	Alpha-fetoprotein (MI016, MI178)	1. Chemiluminescence Microparticle Immunoassay (CMIA): Architect i 2000SR Analyzer 2. Electrochemiluminescence Immunoassay (ECLIA): cobas 8000, Roche
50.	Serum, Plasma	Anti-HIV (MI034)	1. Electrochemiluminescent Immunoassay (ECIM) 2. Chemiluminescent Microparticle

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital
has been accepted as an accredited laboratory in the field of Medical Laboratory for the
following scope

No.	Type of Sample	Test	Method
			Immunoassay (CMIA): Architect <i>i2000</i> SR Analyzer 3. Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche
51.	Serum, Plasma	HIV p24 Ag (MI036)	1. Electro Chemiluminescent Immunoassay (ECLIA): Modular E170 Analyzer 2. Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche
52.	Serum, Plasma	HBe Antigen (MI037)	1. Electrochemiluminescent Immunoassay (ECIM) 2. Chemiluminescent Microparticle Immunoassay (CMIA): Architect <i>i2000</i> SR Analyzer 3. Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital has been accepted as an accredited laboratory in the field of Medical Laboratory for the following scope

No.	Type of Sample	Test	Method
53.	Serum, Plasma	HBs Antigen (MI038)	<ol style="list-style-type: none"> 1. Electrochemiluminescent Immunoassay (ECIM) 2. Chemiluminescent Microparticle Immunoassay (CMIA): Architect i2000 SR Analyzer 3. Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche
54.	Serum, Plasma	HBc Antibody (MI039)	<ol style="list-style-type: none"> 1. Electrochemiluminescent Immunoassay (ECIM) 2. Chemiluminescent Microparticle Immunoassay (CMIA): Architect i2000 SR Analyzer 3. Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche
55.	Serum, Plasma	HBs Antibody (MI040)	<ol style="list-style-type: none"> 1. Electrochemiluminescent Immunoassay (ECIM) 2. Chemiluminescent Microparticle Immunoassay (CMIA): Architect

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital has been accepted as an accredited laboratory in the field of Medical Laboratory for the following scope

No.	Type of Sample	Test	Method
			<i>i2000</i> SR Analyzer 3. Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche
56.	Serum, Plasma	HBe Antibody (MI041)	1. Electrochemiluminescent Immunoassay (ECIM) 2. Chemiluminescent Microparticle Immunoassay (CMIA): Architect <i>i2000</i> SR Analyzer 3. Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche
57.	Serum, Plasma	HBc IgM Antibody (MI042)	1. Electrochemiluminescent Immunoassay (ECIM) 2. Chemiluminescent Microparticle Immunoassay (CMIA): Architect <i>i2000</i> SR Analyzer 3. Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital has been accepted as an accredited laboratory in the field of Medical Laboratory for the following scope

No.	Type of Sample	Test	Method
58.	Serum, Plasma	HAV IgM Antibody (MI043)	<ol style="list-style-type: none"> 1. Electrochemiluminescent Immunoassay (ECIM) 2. Chemiluminescent Microparticle Immunoassay (CMIA): Architect <i>i2000</i> SR Analyzer 3. Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche
59.	Serum, Plasma	HAV Antibody (MI044)	<ol style="list-style-type: none"> 1. Electrochemiluminescent Immunoassay (ECIM) 2. Chemiluminescent Microparticle Immunoassay (CMIA): Architect <i>i2000</i> SR Analyzer 3. Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche
60.	Serum, Plasma	Anti HCV (MI045)	<ol style="list-style-type: none"> 1. Electrochemiluminescent Immunoassay (ECIM) 2. Chemiluminescent Microparticle Immunoassay (CMIA): Architect

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital has been accepted as an accredited laboratory in the field of Medical Laboratory for the following scope

No.	Type of Sample	Test	Method
			<i>i2000</i> SR Analyzer 3. Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche
61.	Serum, Plasma	HBsAg quantitative (MI151)	1. Chemiluminescent Microparticle Immunoassay (CMIA): Architect <i>i2000</i> SR Analyzer 2. Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roch
62.	Serum, Plasma	Treponemal Ab (MI160)	1. Chemiluminescence Microparticle Immunoassay (CMIA): Architect i 2000SR Analyzer 2. Elecsys (Cobas) Syphilis, Roche
63.	Serum, Plasma	IgG (MI001)	1. Nephelometry, BN Prospecc Analyzer 2. Turbidimetry, COBAS 8000, ROCHE

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital has been accepted as an accredited laboratory in the field of Medical Laboratory for the following scope

No.	Type of Sample	Test	Method
64.	Serum, Plasma	IgM (MI002)	1. Nephelometry, <i>BN Prospe</i> Analyzer 2. Turbidimetry, COBAS 8000, ROCHE
65.	Serum, Plasma	IgA (MI003)	1. Nephelometry, <i>BN Prospe</i> Analyzer 2. Turbidimetry, COBAS 8000, ROCHE
66.	Serum, Plasma	Total IgE (MI004)	1. Nephelometry, <i>BN Prospe</i> Analyzer 2. Electrochemiluminescence Immunoassay, COBAS 8000, ROCHE
67.	Serum, Plasma	IgG1 (MI006)	1. Nephelometry, <i>BN Prospe</i> Analyzer 2. Turbidimetry, SPA PLUS
68.	Serum, Plasma	IgG2 (MI007)	1. Nephelometry, <i>BN Prospe</i> Analyzer 2. Turbidimetry, SPA PLUS

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital has been accepted as an accredited laboratory in the field of Medical Laboratory for the following scope

No.	Type of Sample	Test	Method
69.	Serum, Plasma	IgG3 (MI008)	1. Nephelometry, <i>BN Prospec</i> Analyzer 2. Turbidimetry, SPA PLUS
70.	Serum, Plasma	IgG4 (MI009)	1. Nephelometry, <i>BN Prospec</i> Analyzer 2. Turbidimetry, SPA PLUS
71.	Serum	C3 (MI013)	1. Nephelometry, <i>BN Prospec</i> Analyzer 2. Turbidimetry, COBAS 8000, ROCHE
72.	Serum	C4 (MI014)	1. Nephelometry, <i>BN Prospec</i> Analyzer 2. Turbidimetry, COBAS 8000, ROCHE
73.	Serum, Plasma	β 2-Microglobulin (MI017)	1. Nephelometry, <i>BN Prospec</i> Analyzer 2. Turbidimetry, COBAS 8000, ROCHE

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital has been accepted as an accredited laboratory in the field of Medical Laboratory for the following scope

No.	Type of Sample	Test	Method
			3. Turbidimetry, SPA PLUS
74.	Serum, Plasma	Rheumatoid Factor (MI026)	1. Nephelometry: BN Prospec Analyzer 2. Turbidimetry, COBAS 8000, ROCHE
75.	Serum, Plasma	CRP (MI051)	1. Nephelometry: BN Prospec Analyzer 2. Turbidimetry, COBAS 8000, ROCHE
76.	Serum, Plasma	ASO (MI054)	1. Nephelometry: BN Prospec Analyzer 2. Turbidimetry, COBAS 8000, ROCHE
77.	Serum, Plasma	Anti-DNase B (MI098)	1. Nephelometry: BN Prospec Analyzer 2. Turbidimetry, COBAS 8000, ROCHE
78.	Serum, Plasma	CRP (High sensitivity) (MI110)	1. Nephelometry: BN Prospec Analyzer

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital
has been accepted as an accredited laboratory in the field of Medical Laboratory for the
following scope

No.	Type of Sample	Test	Method
			2. Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche
79.	Serum	Immunofixation (MI131)	1. Immunofixation, Quick gel 2. Immunofixation, SPIFE3000
80.	Serum, Plasma	Serum free light chain: Kappa (MI135)	1. Nephelometry: BN Prospec Analyzer 2. Turbidimetry, SPA PLUS
81.	Serum, Plasma	Serum free light chain: Lambda (MI136)	1. Nephelometry: BN Prospec Analyzer 2. Turbidimetry, SPA PLUS
82.	Serum, Plasma	Specific IgE to Peanut (f13) (MI113)	Fluoroenzymeimmunoassay (FEIA): ImmunoCAP
83.	Serum, Plasma	Specific IgE to Soya bean (f14) (MI114)	Fluoroenzymeimmunoassay (FEIA): ImmunoCAP
84.	Serum, Plasma	Specific IgE to Wheat (f4) (MI115)	Fluoroenzymeimmunoassay (FEIA): ImmunoCAP

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital has been accepted as an accredited laboratory in the field of Medical Laboratory for the following scope

No.	Type of Sample	Test	Method
85.	Serum, Plasma	Specific IgE to Fish (f3) (MI116)	Fluoroenzymeimmunoassay (FEIA): ImmunoCAP
86.	Serum, Plasma	Specific IgE to Shrimp (f24) (MI117)	Fluoroenzymeimmunoassay (FEIA): ImmunoCAP
87.	Serum, Plasma	Specific IgE to Egg white (f1) (MI118)	Fluoroenzymeimmunoassay (FEIA): ImmunoCAP
88.	Serum, Plasma	Specific IgE to Milk (f2) (MI119)	Fluoroenzymeimmunoassay (FEIA): ImmunoCAP
89.	Serum, Plasma	Specific IgE to House dust mite (d1-Dp) (MI120)	Fluoroenzymeimmunoassay (FEIA): ImmunoCAP
90.	Serum, Plasma	Specific IgE to House dust mite (d2-Df) (MI121)	Fluoroenzymeimmunoassay (FEIA): ImmunoCAP
91.	Serum, Plasma	Specific IgE to Cat epithelium and dander (e1) (MI122)	Fluoroenzymeimmunoassay (FEIA): ImmunoCAP
92.	Serum, Plasma	Specific IgE to Dog dander (e5) (MI123)	Fluoroenzymeimmunoassay (FEIA): ImmunoCAP

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital has been accepted as an accredited laboratory in the field of Medical Laboratory for the following scope

No.	Type of Sample	Test	Method
93.	Serum, Plasma	Specific IgE to Cockroach (i206) (MI124)	Fluoroenzymeimmunoassay (FEIA): ImmunoCAP
94.	Serum, Plasma	Specific IgE to Latex (k82) (MI125)	Fluoroenzymeimmunoassay (FEIA): ImmunoCAP
95.	Serum, Plasma	Specific IgE to Mixed food (fx5) (MI126)	Fluoroenzymeimmunoassay (FEIA): ImmunoCAP
96.	Serum, Plasma	Specific IgE to Mixed grass (gx2) (MI127)	Fluoroenzymeimmunoassay (FEIA): ImmunoCAP
97.	Serum, Plasma	Specific IgE to Fire ant (i70) (MI150)	Fluoroenzymeimmunoassay (FEIA): ImmunoCAP
98.	Serum, Plasma	Specific IgE to Crab (f23) (MI152)	Fluoroenzymeimmunoassay (FEIA): ImmunoCAP
99.	Serum, Plasma	Specific IgE to Squid (f258) (MI153)	Fluoroenzymeimmunoassay (FEIA): ImmunoCAP
100.	Serum, Plasma	Specific IgE to Amoxilloyl (c6) (MI154)	Fluoroenzymeimmunoassay (FEIA): ImmunoCAP

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital has been accepted as an accredited laboratory in the field of Medical Laboratory for the following scope

No.	Type of Sample	Test	Method
101.	Serum, Plasma	Specific IgE to Penicilloyl G (c1) (MI155)	Fluoroenzymeimmunoassay (FEIA): ImmunoCAP
102.	Serum, Plasma	Specific IgE to egg white panel (f1, f232, f233) (MI179)	Fluoroenzymeimmunoassay (FEIA): ImmunoCAP
103.	Serum, Plasma	Specific IgE to milk panel (f2, f77, f78) (MI180)	Fluoroenzymeimmunoassay (FEIA): ImmunoCAP
104.	Serum, Plasma	Specific IgE to wheat panel (f4, f416) (MI181)	Fluoroenzymeimmunoassay (FEIA): ImmunoCAP
105.	Serum, Plasma	Specific IgE to egg yolk (f75) (MI187)	Fluoroenzymeimmunoassay (FEIA): ImmunoCAP
106.	Serum, Plasma	Tryptase (MI130)	Fluoroenzymeimmunoassay (FEIA): ImmunoCAP
107.	EDTA Blood	Lymphocytic study CD4/CD8 (MI067)	Flow Cytometry: Sysmex XS-1000i Analyzer
108.	EDTA Blood	Leukocyte markers (CD3, CD4, CD8, CD19, CD56) (MI068)	Flow Cytometry: Sysmex XS-1000i Analyzer

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital has been accepted as an accredited laboratory in the field of Medical Laboratory for the following scope

No.	Type of Sample	Test	Method
109.	EDTA Blood	CD3, CD4 counts (MI088)	Flow Cytometry: Sysmex XS-1000i Analyzer
110.	EDTA Blood	B cell count (CD19) (MI112)	Flow Cytometry: Sysmex XS-1000i Analyzer
111.	EDTA blood	NK cell count (CD16+56) (MI111)	Flow Cytometry: Sysmex XS-1000i Analyzer
112.	Serum, Plasma	Antinuclear Ab (MI018)	Indirect Immunofluorescence Assay (IFA)
113.	Serum, Plasma	Anti dsDNA (MI019)	Enzyme Linked Immunosorbent Assay: I-2P Analyzer
114.	Serum, Plasma	Anti RNP (MI021)	Enzyme Linked Immunosorbent Assay: I-2P Analyzer
115.	Serum, Plasma	Anti Sm (MI022)	Enzyme Linked Immunosorbent Assay: I-2P Analyzer
116.	Serum, Plasma	Anti SS-A (MI023)	Enzyme Linked Immunosorbent Assay: I-2P Analyzer

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital has been accepted as an accredited laboratory in the field of Medical Laboratory for the following scope

No.	Type of Sample	Test	Method
117.	Serum, Plasma	Anti SS-B (MI024)	Enzyme Linked Immunosorbent Assay: I-2P Analyzer
118.	Serum, Plasma	Antithyroglobulin (MI027)	1. Enzyme Linked Immunosorbent Assay: I-2P Analyzer 2. Elecsys (cobas) Anti TG, Roche 3. Electrochemiluminescence Immunoassay (ECLIA): cobas 8000, Roche
119.	Serum, Plasma	Anti thyroid Peroxidase (MI028)	1. Enzyme Linked Immunosorbent Assay: I-2P Analyzer 2. Elecsys (cobas) Anti TPO, Roche 3. Electrochemiluminescence Immunoassay (ECLIA): cobas 8000, Roche
120.	Serum, Plasma	Anticardiolipin IgG (MI029)	Enzyme Linked Immunosorbent Assay: I-2P Analyzer
121.	Serum, Plasma	Anticardiolipin IgM (MI030)	Enzyme Linked Immunosorbent Assay: I-2P Analyzer

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital has been accepted as an accredited laboratory in the field of Medical Laboratory for the following scope

No.	Type of Sample	Test	Method
122.	Serum, Plasma	Antimitochondria Ab (MI032)	Indirect Immunofluorescence Assay (IFA)
123.	Serum, Plasma	Antismooth muscle Ab (MI033)	Indirect Immunofluorescence Assay (IFA)
124.	Serum, Plasma	ANA profile 1 (MI132)	Immunoblot
125.	Serum, Plasma	Anti CCP (MI146)	Enzyme Linked Immunosorbent Assay: I-2P Analyzer
126.	Serum, Plasma	Anti β 2 glycoprotein I-IgG (MI156)	Enzyme Linked Immunosorbent Assay: I-2P Analyzer
127.	Serum, Plasma	Anti β 2 glycoprotein I-IgM (MI157)	Enzyme Linked Immunosorbent Assay: I-2P Analyzer
128.	EDTA Blood	HLA Class II DNA TYPING (MI080)	1. Polymerase Chain Reaction – Sequence Specific Primer (PCR-SSP) 2. Polymerase Chain Reaction – Sequence Specific Oligonucleotide probes (PCR-SSO)

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital has been accepted as an accredited laboratory in the field of Medical Laboratory for the following scope

No.	Type of Sample	Test	Method
129.	EDTA Blood	HLA Class I DNA TYPING (MI089)	1. Polymerase Chain Reaction – Sequence Specific Primer (PCR-SSP) 2. Polymerase Chain Reaction – Sequence Specific Oligonucleotide probes (PCR-SSO)
130.	EDTA Blood	HLA-B27 (MI091)	1. Polymerase Chain Reaction – Sequence Specific Primer (PCR-SSP) 2. Polymerase Chain Reaction – Sequence Specific Oligonucleotide probes (PCR-SSO)
131.	EDTA Blood	HLA-A DNA TYPING (MI107)	1. Polymerase Chain Reaction – Sequence Specific Primer (PCR-SSP) 2. Polymerase Chain Reaction – Sequence Specific Oligonucleotide probes (PCR-SSO)
132.	EDTA Blood	HLA-B DNA TYPING (MI108)	1. Polymerase Chain Reaction – Sequence Specific Primer (PCR-

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital has been accepted as an accredited laboratory in the field of Medical Laboratory for the following scope

No.	Type of Sample	Test	Method
			SSP) 2. Polymerase Chain Reaction – Sequence Specific Oligonucleotide probes (PCR-SSO)
133	EDTA Blood	HLA-B*5701 (MI144)	1. Polymerase Chain Reaction – Sequence Specific Primer (PCR-SSP) 2. Multiplex Allele-Specific PCR 3. Polymerase Chain Reaction – Sequence Specific Oligonucleotide probes (PCR-SSO)
134	EDTA Blood	HLA-B*5801 (MI145)	1. Polymerase Chain Reaction – Sequence Specific Primer (PCR-SSP) 2. Polymerase Chain Reaction – Sequence Specific Oligonucleotide probes (PCR-SSO)
135	EDTA Blood	HLA-B*1502 (MI149)	1. Polymerase Chain Reaction – Sequence Specific Primer (PCR-

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital has been accepted as an accredited laboratory in the field of Medical Laboratory for the following scope

No.	Type of Sample	Test	Method
			SSP) 2. Multiplex Allele-Specific PCR 3. Polymerase Chain Reaction – Sequence Specific Oligonucleotide probes (PCR-SSO)
136	EDTA Blood	HLA-B51 (MI162)	1. Polymerase Chain Reaction – Sequence Specific Primer (PCR- SSP) 2. Polymerase Chain Reaction – Sequence Specific Oligonucleotide probes (PCR-SSO)
137	Serum, Plasma, CSF	VDRL (RPR) (MI046)	Flocculation Reaction
138	Serum, Plasma	TPHA (TP-PA) (MI047)	Hemagglutination (HA) Particle Agglutination (PA)
139	CSF	FTA (CSF) (MI048)	Indirect Immunofluorescence Assay (IFA)
140	Serum	FTA-ABS IgG (MI049)	Indirect Immunofluorescence Assay (IFA)

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital has been accepted as an accredited laboratory in the field of Medical Laboratory for the following scope

No.	Type of Sample	Test	Method
141	Serum	FTA-ABS IgM (MI050)	Indirect Immunofluorescence Assay (IFA)
142	Serum, Plasma	Anti HIV (Urgent) (MI035)	1. Chemiluminescence Microparticle Immunoassay (CMIA): Architect i 2000SR Analyzer 2. Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche
143	Serum, Plasma	HBsAg (Urgent) (MI104)	1. Chemiluminescence Microparticle Immunoassay (CMIA): Architect i 2000SR Analyzer 2. Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche
144	Serum, Plasma	Anti HBs (Urgent) (MI105)	1. Chemiluminescence Microparticle Immunoassay (CMIA): Architect i 2000SR Analyzer 2. Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000,

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital has been accepted as an accredited laboratory in the field of Medical Laboratory for the following scope

No.	Type of Sample	Test	Method
			Roche
145	Serum, Plasma	Anti HBc (Urgent) (MI106)	1. Chemiluminescence Microparticle Immunoassay (CMIA): Architect i 2000SR Analyzer 2. Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche
146	Serum, Plasma	Anti HCV (Urgent) (MI109)	1. Chemiluminescence Microparticle Immunoassay (CMIA): Architect i 2000SR Analyzer 2. Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche
147	Serum, Plasma	Treponemal Ab (Urgent) (MI161)	1. Chemiluminescence Microparticle Immunoassay (CMIA): Architect i 2000SR Analyzer 2. Elecsys (Cobas) Syphilis, Roche
148	Serum	Serum Protein Electrophoresis (SPEP) (MI011)	Capillary Electrophoresis

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital has been accepted as an accredited laboratory in the field of Medical Laboratory for the following scope

No.	Type of Sample	Test	Method
149	Serum	Serum Immunotyping Electrophoresis (MI158)	Capillary Electrophoresis
150	Serum	Scrub typhus Ab-IgG (MI076)	Indirect Immunofluorescence Assay
151	Serum	Scrub typhus Ab IgM (MI077)	Indirect Immunofluorescence Assay
152	Serum	Murine typhus Ab-IgG (MI133)	Indirect Immunofluorescence Assay
153	Serum	Murine typhus Ab-IgM (MI134)	Indirect Immunofluorescence Assay
154	Serum	Anti HEV IgG (MI163)	Enzyme Linked Immunosorbent Assay
155	Serum	Anti HEV IgM (MI164)	Enzyme Linked Immunosorbent Assay
156	Heparinized blood	QuantiFERON-TB Gold (MI183)	Enzyme Linked Immunosorbent Assay
157	Serum, Plasma	Thyroglobulin (MI202)	1. Electro Chemiluminescent Immunoassay (ECLIA): cobas e411, Roche 2. Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche
158	Serum, Plasma	ANCA (IFA) (MI182)	Indirect Immunofluorescence Assay

The Laboratory of Division of Microbiology, King Chulalongkorn Memorial Hospital has been accepted as an accredited laboratory in the field of Medical Laboratory for the following scope

No.	Type of Sample	Test	Method
159	Serum, Plasma	Anti PLA2R (MI186)	Enzyme Linked Immunosorbent Assay
160	Serum, Plasma	Anticardiolipin IgA (MI031)	Enzyme Linked Immunosorbent Assay
161	Serum, Plasma	Myositis profile 4 (MI176)	Immunoblot
162	Serum, Plasma	M. pneumoniae IgG (MI100)	Enzyme Linked Immunosorbent Assay
163	Serum, Plasma	M. pneumoniae IgM (MI101)	Enzyme Linked Immunosorbent Assay