

NTHRYS

OPC PVT LTD

SECTION • IMM

Immunoassays & Antibody-Based Detection

Hands-on wet-lab training in antibody-based detection — ELISA and plate immunoassays, immunoblotting, immunofluorescence and immunohistochemistry, flow cytometry and cell-based assays, antibody production and characterisation, and specialised quantitative immunoassays.

06

CATEGORIES

30

PROTOCOLS

IMM

SECTION ID

2026

EDITION

Categories & Protocols

Section **IMM** spans 6 category streams and 30 bench protocols. Every protocol carries a unique code for enrolment, tracking and certification.

IMM-EL	ELISA & Plate-Based Immunoassays Direct, sandwich, competitive & multiplex assays	05
IMM-BL	Immunoblotting & Membrane Detection Western, dot/slot & multiplex membrane detection	05
IMM-IF	Immunofluorescence & Immunohistochemistry ICC, IHC, multicolour IF & confocal imaging	05
IMM-FC	Flow Cytometry & Cell-Based Immunoassays Surface/intracellular staining, gating & sorting	05
IMM-AB	Antibody Production & Characterisation Polyclonal, monoclonal, purification & conjugation	05
IMM-SP	Specialised & Quantitative Immunoassays RIA, lateral-flow, immuno-PCR & validation	05
TOTAL	All training protocols in section IMM	30

CODE FORMAT

IMM • **IF** • **01**

IMM section

IF category

01 protocol

01

■ CATEGORY · IMM-EL

ELISA & Plate-Based Immunoassays

Direct, sandwich, competitive & multiplex assays

05

PROTOCOLS

CODE

TRAINING PROTOCOL

DESCRIPTION

IMM-EL-01

Direct & Indirect ELISA

Basic plate immunoassay formats.

IMM-EL-02

Sandwich ELISA

Capture-detection quantitation.

IMM-EL-03

Competitive ELISA

Small-analyte quantitation.

IMM-EL-04

ELISA Optimisation & Validation

Sensitivity & reproducibility.

IMM-EL-05

Multiplex Bead Assays (Luminex)

Many analytes per well.

02

CATEGORY • IMM-BL

Immunoblotting & Membrane Detection

Western, dot/slot & multiplex membrane detection

05
PROTOCOLS

CODE

TRAINING PROTOCOL

DESCRIPTION

IMM-BL-01

**Western Blot
Immunodetection**

Antibody-based protein detection.

IMM-BL-02

Dot-Blot Immunoassay

Rapid spot detection.

IMM-BL-03

Slot-Blot Quantification

Manifold-based quantitation.

IMM-BL-04

**Chemiluminescent /
Fluorescent Detection**

Signal-readout chemistries.

IMM-BL-05

**Multiplex Western
Detection**

Multi-target single blot.

03

■ CATEGORY · IMM-IF

Immunofluorescence & Immunohistochemistry

ICC, IHC, multicolour IF & confocal imaging

05

PROTOCOLS

CODE

TRAINING PROTOCOL

DESCRIPTION

IMM-IF-01

Immunocytochemistry (ICC)

Cultured-cell staining.

IMM-IF-02

Immunohistochemistry (IHC)

Tissue-section staining.

IMM-IF-03

Immunofluorescence Staining

Fluorescent target localisation.

IMM-IF-04

Multiplex / Multicolour IF

Co-localisation imaging.

IMM-IF-05

Confocal Imaging & Analysis

High-resolution capture.

04

■ CATEGORY · IMM-FC

Flow Cytometry & Cell-Based Immunoassays

Surface/intracellular staining, gating & sorting

05
PROTOCOLS

CODE

TRAINING PROTOCOL

DESCRIPTION

IMM-FC-01

Surface-Marker Staining

Membrane-antigen labelling.

IMM-FC-02

Intracellular Staining

Fixed-permeabilised labelling.

IMM-FC-03

Multicolour Panel Design

Fluorophore-panel planning.

IMM-FC-04

Compensation & Gating

Spectral-overlap correction.

IMM-FC-05

Cell Sorting (FACS)

Marker-based cell isolation.



■ CATEGORY · IMM-AB

Antibody Production & Characterisation

Polyclonal, monoclonal, purification & conjugation



CODE	TRAINING PROTOCOL	DESCRIPTION
IMM-AB-01	Polyclonal Antibody Production	Immunisation & serum collection.
IMM-AB-02	Monoclonal / Hybridoma Generation	Fusion & clone selection.
IMM-AB-03	Antibody Purification	Protein-A/G & affinity purification.
IMM-AB-04	Antibody Titre & Specificity	Performance characterisation.
IMM-AB-05	Antibody Conjugation & Labelling	Enzyme / fluorophore coupling.



■ CATEGORY · IMM-SP

Specialised & Quantitative Immunoassays

RIA, lateral-flow, immuno-PCR & validation



PROTOCOLS

CODE

TRAINING PROTOCOL

DESCRIPTION

IMM-SP-01

Radioimmunoassay (RIA)

Isotope-based quantitation.

IMM-SP-02

Lateral-Flow / Rapid Tests

Point-of-care immunoassays.

IMM-SP-03

Immuno-PCR

Antibody-PCR signal amplification.

IMM-SP-04

Surface-Marker
Quantification

Absolute marker counting.

IMM-SP-05

Assay Validation &
Standardisation

Accuracy & reproducibility.

Detect with antibody precision

Every protocol in Section IMM is delivered as hands-on bench training — from ELISA and Western immunodetection through immunofluorescence, flow cytometry and antibody generation. Antibodies turn a single target protein into a specific, quantifiable, often spatially resolved signal.

30 protocols

6 categories

IMM section

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