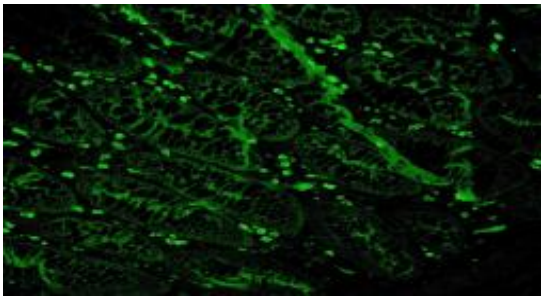
IgM / FITC

Catalog No.	Format	Dilution	Volume
G-3008-3	Prediluted	Ready-to-use	3.0 ml
G-3008-7	Prediluted	Ready-to-use	7.0 ml
G-3008-15	Prediluted	Ready-to-use	15.0 ml
G-3008-05	Concentrated	1:25–1:100	0.5 ml
G-3008-1	Concentrated	1:25–1:100	1.0 ml



Inset: IF of IgM on a FFPE Colon Tissue

Product Specifications

- **Antibody Type**: Rabbit Polyclonal
- **Isotype**: IgG
- **Species Reactivity**: Human
- **Localization**: Cytoplasmic
- **Immunogen**: Purified human IgM heavy chain.
- **Source**: Rabbit

Presentation:
The IgM/FITC is a purified rabbit polyclonal antibody labelled with FITC diluted in a Tris Buffered Saline solution (pH 7.2) containing stabilizing proteins and preserved with sodium azide. It is provided in liquid form.

Intended Use:

For Research Use Only (RUO). this antibody enables fluorescent microscopy-based detection of IgM in FFPE tissue. Interpretation should be performed by a pathologist in conjunction with other clinical and histological information.

All test result interpretations must be performed by a qualified medical professional.

Scientific Background:
IgM creates polymers, which are typically pentamers or occasionally hexamers, by covalently joining many immunoglobulins with disulphide linkages. In its pentamer form, it has a huge molecular mass of about 900 kDa. The gene segment that codes for the heavy chain's constant area is located first among other gene segments encoding constant regions in germline cells. IgM is the first immunoglobulin that mature B-cells express because of this.

Surface immunoglobulin IgM mu chains react with IgM antibodies. One of the most common surface immunoglobulins on B-lymphocytes, IgM is helpful in identifying leukaemias, plasmacytomas, and Hodgkin's lymphomas generated from B-cell lineage. Clonal gene-rearrangement studies can demonstrate B-cell lymphomas because heavy and light chain expression is confined in these disorders. An inflammation of the kidneys brought on by systemic lupus erythematosus is known as lupus nephritis. Immunofluorescence shows positive results for C3, C1q, IgG, IgA, and IgM. Clinically, there is proteinuria and haematuria, either alone or in conjunction with nephrotic disorders. An unusual glomerular condition known as immunoglobulin M (IgM) nephropathy is typified by IgM deposits in the mesangium.

Product Overview:

This antibody is designed for immunofluorescence (IF) applications to detect IgM proteins in formalin-fixed, paraffin-embedded (FFPE) human tissue. It is suitable for identifying normal or abnormal expression patterns in tissues. Use is restricted to trained laboratory professionals.

Required Materials (Not Included)

- Control tissues (positive/negative)
- Positively charged slides
- Deparaffinization and staining solutions (e.g., xylene, ethanol)
- Heating equipment (e.g., Genebio Solution Digital Antigen Retrieval)
- Epitope retrieval solutions (Citrate or EDTA)
- Mounting media (e.g., Mounting, with or without DAPI)
- Fluorescence microscope with FITC filter

Storage Instructions: Antibody: 2–8°C; Avoid temperature fluctuations and prolonged room temperature exposure.

IF Protocol for FFPE Tissue

1. Slice and place tissues encased in paraffin that have been formalin-fixed at a thickness of 3–5 microns on positively charged slides, like Genebio Hydrophilic Plus Slides.
2. Let it air dry at 58° C for two hours.
3. Rehydrate, dehydrate, and deparaffinize tissues.
4. Use an appropriate retrieval solution with Citrate or EDTA, to subject tissues to heat-induced epitope retrieval (HIER).
5. Warm up Mounting Solution with DAPI until it reaches room temperature.
6. Use deionised or distilled water to rinse slides.
7. Before placing slides flat in the dark, drain any extra water.
8. Before opening the dropper bottle, flip the media bottle upside down.
9. Make sure the specimen is coated by applying one to three drops of mounting solution to each slide.
10. Incubate in the dark for three to five minutes at room temperature. Coverslip.
11. Use the proper filters to view under a fluorescence microscope.

12. It is advised that the slides be kept in the dark and between 2 and 8 °C.

Note: Prediluted antibody is ready to use. Concentrated forms require user-defined dilution.

Controls and Quality Assurance

- Positive Controls: Tonsil, Colon, Lymph node, Spleen, Kidney
- Negative Controls: Internal negative areas within tissue or control reagents without primary antibody

All testing should include both positive and negative controls to confirm reagent functionality and staining specificity.

Precautions

- For trained professionals only.
- Contains <0.1% sodium azide—handle with appropriate safety precautions.
- Always wear PPE.
- Refer to the Safety Data Sheet and CDC guidelines for biological specimen handling.

Limitations

Due to variable conditions in IHC protocols (e.g., tissue fixation, antibody dilution), each lab should optimize their method using control samples. Only qualified professionals should evaluate results.