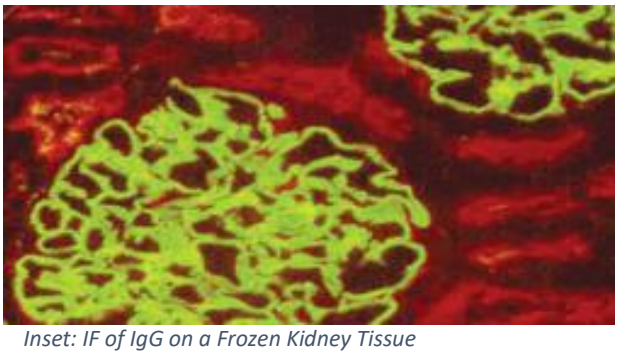
IgG / FITC

Catalog No.	Format	Dilution	Volume
G-3007-3	Prediluted	Ready-to-use	3.0 ml
G-3007-7	Prediluted	Ready-to-use	7.0 ml
G-3007-15	Prediluted	Ready-to-use	15.0 ml
G-3007-05	Concentrated	1:25–1:100	0.5 ml
G-3007-1	Concentrated	1:25–1:100	1.0 ml



Inset: IF of IgG on a Frozen Kidney Tissue

Product Specifications

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

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

Intended Use:

For Research Use Only (RUO). this antibody enables fluorescent microscopy-based detection of IgG 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:
IgG is an immunoglobulin that is monomeric and consists of two heavy and two light chains. This is the most prevalent immunoglobulin, making up 75% of human serum immunoglobulins and being roughly equally distributed in tissue and blood fluids. The only isotype that can bind to a wide variety of pathogens and cross the placenta is this one. By neutralising their poisons, opsonising for phagocytosis, and activating the complement (classic pathway), IgG defends the body against them. IgG1 (66%), IgG2 (23%), IgG3 (7%), and IgG4 (4%), are the four subclasses.

Surface immunoglobulin IgG gamma chains react with IgG antibodies. Leukaemias, plasmacytomas, and Hodgkin's lymphomas generated from B-cell lineage can all be identified with this antibody. Clonal gene-rearrangement studies can demonstrate B-cell lymphomas because of the limited expression of heavy and light chains in these disorders. Systemic Lupus Erythematosus is the cause of lupus nephritis, an inflammation of the kidneys. Immunofluorescence shows positive results for C3, C1q, IgG, IgA, and IgM. Clinically, there may or may not be nephrotic symptoms along with haematuria and proteinuria. Recent research has identified mesangial IgG glomerulonephritis as a separate kind of glomerulonephritis. These individuals met the morphologic criteria, which included mesangial dense deposits by ultrastructural examinations and immunofluorescence that was primarily positive for IgG.

Product Overview:
This antibody is designed for immunofluorescence (IF) applications to detect IgG 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, such as Genebio Solution Retriever 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, Lymph Node, Kidney, Spleen
- 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.