Description	**Tetramethylrhodamine isothiocyanate-conjugated IgG fraction of polyclonal goat antiserum to rat IgG, Fc specific**
Product code	GARa/IgG(Fc)/TRITC
Biological origin	Goat
Physical form	TRITC-coupled purified hyperimmune goat IgG lyophilized from a solution in phosphate buffered saline (PBS, pH 7.2).
Preservative	No preservative added, as it may interfere with the antibody activity.
Immunogen	Purified normal IgG, including all known subclasses, isolated from pooled rat serum. Freund's complete adjuvant is used in the first step of the immunization procedure.
Purification	Hyperimmune antisera with strong precipitating activity are selected for fractionation by salt-precipitation and purification of the IgG fraction by DEAE-chromatography.
Adsorption	Immunoaffinity adsorbed using insolubilized antigens as required to eliminate antibodies cross-reacting with other components of the immunoglobulin system or reacting with other serum proteins. Special attention is given to the removal of antibodies to common Ig/Fab. The use of insolubilized adsorption antigens prevents the presence of excess adsorbent protein or immune complexes in the antiserum.
Identity & Specificity	The reactivity of the antiserum is directed to the Fc subunit of the IgG molecule. The antiserum contains antibodies to subclass-specific determinants as well as to determinants shared by two or more subclasses of IgG. In immunoelectrophoresis and double radial immunodiffusion, using various antiserum concentrations against normal rat plasma, serum, and immunoglobulin fractions, no reaction is obtained with IgA, IgM and IgG/Fab fragments or any other serum protein.
Cross-reactivity	Inter-species cross-reactivity is a normal feature of antibodies to immunoglobulins, since Ig of different species frequently share antigenic determinants. Cross-reactivity of this antiserum has not been tested in detail.
Physicochemical characteristics	IgG protein concentration 10 mg/ml. Fluorochrome/IgG protein molar ratio (F/P) is approximately 1.8. No foreign proteins added.
Fluorescent marker	Tetramethylrhodamine isothiocyanate isomer R. It has an orange-red fluorescence. Excitation: 554 nm, emission: 573 nm. To avoid nonspecific background staining, specially synthesized and exceptionally pure crystalline isomer R has been used instead of the usual racemic mixture. Although its fluorescence efficiency is less than of FITC, TRITC conjugates have the advantage of significantly less photo bleaching. This facilitates their use in quantitative cell-counting procedures.
Conjugation procedure	A proprietary technique for the binding to TRITC is used, followed by several purification steps to remove free reactants and protein aggregates. After each step activity and specificity are tested in a variety of techniques. The conjugate is lyophilized to assure stability and long shelf life.
Intended use	Direct immunofluorescence staining of cytoplasmic Ig of appropriately treated cell and tissue substrates; to demonstrate immunoglobulins or specific antibodies in cells and tissues; to identify circulating antibodies in serodiagnostic microbiology and autoimmune diseases. *This immunoconjugate is not pre-diluted. The optimum working dilution of each conjugate should be established by titration before being used. Excess labelled antibody must be avoided because it may cause high unspecific background staining and interfere with the specific signal.* Working dilutions are usually between 1:10 and 1:30.
Handling	The lyophilized conjugate is shipped at ambient temperature and may be stored at +4°C; prolonged storage at or below -20°C. It is reconstituted by adding 1 ml sterile distilled water, spun down to remove insoluble particles, divided into small aliquots, frozen and stored at or below -20°C. Prior to use, an aliquot is thawed slowly at ambient temperature, spun down again and used to prepare working dilutions by adding sterile phosphate buffered saline (PBS, pH 7.2). Repeated thawing and freezing should be avoided. Working dilutions should be stored at +4°C, not refrozen, and preferably used the same day. If a slight precipitation occurs upon storage, this should be removed by centrifugation. It will not affect the performance of the immunoconjugate.
Packing	Vial with 1 ml lyophilized immunoconjugate.
Storage / shelf life	Lyophilized at +4°C — at least 10 years reconstituted at or below -20°C — 3-5 years reconstituted at +4°C — 7 days
Caution	This immunoconjugate should be handled by qualified persons only and appropriate precautions should be taken in its handling and disposal, and of all associated materials. For *in vitro* laboratory research purposes only.

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