Description	**Tetramethylrhodamine isothiocyanate–conjugated IgG fraction of polyclonal goat antiserum to rat IgG, IgA and IgM, Fc specific**
Product code	GARa/Ig(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 polyclonal rat IgG and pools of homogenous immunoglobulins including all isotypes. Freund's complete adjuvant is used in the first step of the immunization procedure.
Purification	The IgG (7S) fraction is isolated and purified from hyperimmune antisera with strong precipitating activity and contains the bulk of the antibody specificity. It is free of other serum proteins as tested by immunoelectrophoresis and double radial immunodiffusion.
Adsorption	Immunoaffinity adsorbed using insolubilized Ig-depleted rat serum fractions and IgG/Fab as required to eliminate antibodies reacting with the common Fab portion of immunoglobulins or reacting with other serum proteins. 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 subunits of the major isotypes of the rat immunoglobulin system. No reaction is obtained with purified IgG/Fab or any non-Ig protein of rat serum, as tested by immunoelectrophoresis and double radial immunodiffusion.
Cross-reactivity	Inter-species cross-reactivity is a normal feature of antibodies to immunoglobulins, since immunoglobulins of different species frequently share antigenic determinants. Cross-reactivity of this antiserum with other species has not been tested in detail.
Physicochemical characteristics	IgG protein concentration 10 mg/ml. Fluorochrome/IgG protein molar ratio (F/P) is approximately 1.7. 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; to identify a specific antigen or immune complex using a reference antibody of rat origin in the middle layer of the indirect test procedure. *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 1:40.
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 in the dark 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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