Description	**Horseradish peroxidase–conjugated IgG fraction of polyclonal rabbit antiserum to rat IgG, IgA and IgM, heavy and light chains**
Product code	RARa/Ig/PO
Biological origin	Rabbit
Physical form	Peroxidase-coupled purified hyperimmune rabbit 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 homogenous IgA and IgM isolated from rat serum. 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 antigens as required to eliminate antibodies cross-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 major isotypes of the rat immunoglobulin system (classes and both light chain types) including antibodies to common determinants, to class and to the surface determinants of the common Fab portion, as tested by immunoelectrophoresis and double radial immunodiffusion against pooled serum and purified immunoglobulins. In immunoelectrophoresis and double radial immunodiffusion using various antiserum concentrations against normal rat plasma and serum, the characteristic IgG, IgA and IgM precipitin lines are obtained.
Cross-reactivity	Inter-species cross-reactivity is a normal feature of antibodies to mammalian immunoglobulins, since homologous proteins of different species frequently share antigenic determinants. The degree of cross-reactivity is also dependent on the concentrations of the reactants and the sensitivity of the assay arrangement. This antiserum fraction has not been tested for cross-reactivity in detail.
Physicochemical characteristics	IgG protein concentration 12 mg/ml. Peroxidase/IgG protein molar ratio (E/P) is approximately 1.2. No foreign proteins added.
Enzyme marker	Horseradish peroxidase enriched for isoenzyme C (RZ=3.2).
Conjugation procedure	Conjugation is carried out using a proprietary modification of the periodate technique for the binding to peroxidase, followed by several purification steps. 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	In enzyme-immunocytochemical and immunohistochemical staining for the detection of cytoplasmic Ig at the cellular and subcellular level by staining of appropriately treated cell and tissue substrates, and to demonstrate circulating antibodies in serodiagnostic microbiology and autoimmune diseases. The presence of activity to the common Ig/Fab subunit may result in the staining of immunoglobulins bound to Fc-receptors on non-lymphoid cells. Combinations of isotype-specific reagents or GARa/Ig(Fc)/PO should be used instead for this purpose. *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 for histochemical and cytochemical use are usually between 1:250 and 1:500; in ELISA and comparable non-precipitating antibody-binding assays between 1:1,000 and 1:10,000.
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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