Description	**IgG fraction of polyclonal goat antiserum to rat IgG2a, subclass specific**
Product code	GARa/IgG2a/7S
Biological origin	Goat
Physical form	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	Pools of purified homogenous IgG2a 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 and purification of the IgG (7S) fraction containing the bulk of the defined antibody specificity. It is free of other serum proteins as tested by immunoelectrophoresis.
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 subclass IgG2a as tested against rat sera and a panel of purified homogenous immunoglobulins. It does not react with other subclasses of IgG, IgG/Fab fragments, IgM and IgA or any non-Ig protein in rat serum, as tested by immuno-electrophoresis and double radial immunodiffusion.
Cross-reactivity	This IgG fraction is not species-specific since inter-species cross-reactivity is a normal feature of antisera to immunoglobulins. Cross-reactivity of this antiserum has not been tested in detail.
Performance testing	Titre, specificity and reactivity of the subclass specific cross-adsorbed IgG fraction is further evaluated in a number of highly sensitive non-precipitating antibody-binding assay systems. These performance tests include direct single and double identification of cIg in rat cell and tissue substrates and their evaluation as second antibody in the analysis of human cells and tissues after reacting with a primary monoclonal rat antibody to a human antigen. The quantitative specific recognition ability is verified in double staining procedures together with reference reagents of known specificity and reactivity.
Physicochemical characteristics	IgG protein concentration 10 mg/ml. No foreign proteins added.
Intended use	As unlabelled primary or secondary reagent for indirect detection of IgG2a at the cellular and subcellular level by staining of appropriately treated cell and tissue substrates; to prepare conjugates of the user's own choice; to prepare an insoluble immunoaffinity adsorbent or a solid phase antibody reagent by coupling to an artificial carrier and as catching antibody in non-isotopic methodology and solid phase immunochemistry. *When applied in any cytochemical or histochemical staining procedure or solid phase coupling technique, the optimum concentration of the IgG preparation should be established by titration before being used.* Typical working dilutions in histochemistry are usually between 1:100 and 1:500; in ELISA and comparable non-precipitating antibody-binding assays between 1:500 and 1:5,000.
Handling	The lyophilized IgG (7S) fraction 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 product.
Packing	Vial with 10 mg lyophilized IgG (7S) fraction.
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 product 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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