

Description	Biotin-conjugated IgG fraction of polyclonal goat antiserum to C3c fragment of guinea pig complement factor C3	
Product code	GAGp/C3c/Bio	
Biological origin	Goat	
Physical form	Biotin-coupled purified hyperimmune 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	<p>C3 is the most abundant complement protein in guinea pig serum. Its biological function strongly resembles that of C3 in man and other laboratory animal species. It has a central role in the activation system being common to both pathways. Activation of C3 is achieved by very specific limited proteolysis resulting in the release of a number of degradation fragments. The anaphylotoxin C3a promotes smooth muscle contraction and increases vascular permeability: the large C3b fragment is involved in binding to the complement activator and can interact with specific receptors to allow efficient clearance of the activating cell or particle; degradation fragments of C3b (C3bi, C3c, C3dg C3d) are important in receptor binding and clearance mechanisms, in virus neutralization and possibly in the immune response.</p> <p>The antiserum is raised against C3c, which is the major fragment resulting from C3 cleavage by C3 convertase and factor I. It is composed of an intact beta chain bound to two fragments of the alpha chain. Consequently the antiserum reacts with both native and activated C3. It may also react with the fragments C3b, C3bi and C3dg, since they all carry antigenic epitopes of the C3c domain. C3c is isolated and purified from pooled normal guinea pig serum.</p> <p>Freund's complete adjuvant is used in the first step of the immunization procedure.</p>	
Purification	The IgG (7S) fraction is isolated and purified from the antiserum and contains the bulk of the defined 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 reacting with other with other plasma proteins. The use of insolubilized adsorption antigens prevents the presence of excess adsorbent protein or immune complexes in the antiserum.	
Identity Specificity	<p>& In immunoelectrophoresis against fresh guinea pig serum, a single precipitin line is obtained in the beta-1 region representing native C3. Against serum containing partly activated C3, a precipitin line is obtained which extends from the beta-1 into the alpha-2 region, demonstrating a gradient. In old serum containing totally activated C3 a single precipitin line in the alpha-2 region is obtained. Antisera to C3c also react with the fragments C3b, C3bi and smaller fragments, since they all carry antigenic determinants of the C3c domain. The product does not react with any other proteins component of guinea pig serum or plasma.</p>	
Cross-reactivity	The antiserum does not cross-react with any other component of guinea pig plasma. Inter-species cross-reactivity is a normal feature of antibodies to plasma proteins since they frequently share antigenic determinants. Cross-reactivity of this antiserum has not been tested in detail.	
Physicochemical characteristics	IgG protein concentration 10 mg/ml. Biotin/IgG protein molar ratio (B/P) approximately 6.6. No foreign proteins added.	
Marker	N-Hydroxysuccinimidobiotin.	
Manufacturing procedure	A proprietary technique for the binding to biotin is used, 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	<p>The biotin immunoconjugate to guinea pig C3c is used to determine the presence and pattern of C3 in tissue lesions using immunohistochemical staining techniques. Locally deposited immune complexes in tissue usually contain complement, pointing to activation of the classical pathway. Complement activation in vivo implies active disease and may contribute to the elicitation of the pathogenesis and the extent of tissue destruction.</p> <p>In ELISA and Western blotting to identify guinea pig C3c in serum or other body fluids. As a second step an avidin or streptavidin conjugate of the user's choice has to be used.</p> <p><i>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.</i></p> <p>Working dilutions for histochemical and cytochemical use are usually between 1:100 and 1:500; In ELISA and comparable non-precipitating antibody-binding assays between 1:1,000 and 1:5,000.</p>	
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 <i>in vitro</i> research purposes only.	

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