

Description	Precipitating polyclonal rabbit antiserum to C3c subunit of bovine complement C3	
Product code	RAB/C3c	
Biological origin	Rabbit	
Physical form	Delipidated, heat inactivated, lyophilized, stable whole serum.	
Preservative	No preservative added.	
Immunogen	<p>C3 is the most abundant complement protein in bovine 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 in both pathways. Activation of C3 is achieved by specific limited proteolysis resulting in the increase of a number of degradation fragments. The anaphylatoxin 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 and C3d) are important in receptor binding and clearance mechanisms, in virus neutralization and possible in the immune response.</p> <p>The antiserum is raised against C3c which is the major fragment resulting from the 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 antisera to C3c react 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. The protein is isolated and purified from pooled normal bovine serum by precipitation techniques, followed by chromatographical methods.</p> <p>Freund's complete adjuvant is used in the first step of the immunization procedure.</p>	
Adsorption	Immunoaffinity adsorbed using insolubilized antigens as required, to eliminate antibodies reacting with other bovine serum proteins. The use of insolubilized adsorption antigens prevents the presence of excess adsorbent protein or immune complexes in the antiserum.	
Identity & Specificity	In immunoelectrophoresis against fresh bovine 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. The product does not react with any other proteins component of bovine serum or plasma.	
Cross-reactivity	Inter-species cross-reactivity is a normal feature of antibodies to plasma proteins, since homologous proteins of different species frequently share antigenic determinants. Cross-reactivity of this antiserum has not been tested in detail.	
Protein concentration	Total protein and IgG concentrations in the antiserum are comparable to those of normal pooled rabbit serum. No foreign proteins added.	
Antibody titre	Precipitin titre not less than 1:8 when tested against normal bovine plasma in agar-block immunodiffusion titration.	
Intended use	In precipitating techniques as immunoelectrophoresis and single and double radial immunodiffusion (Mancini, Ouchterlony) to identify the presence of complement C3c or to determine its concentration. The presence of non-precipitating antibodies has not been assayed. This does not exclude the use of the antiserum in non-precipitating antibody-binding techniques if proper controls are included. Determinations of individual complement components can be very useful in defining the exact location of a defect.	
Directions for use	In immunoelectrophoresis use 2 µl bovine plasma or equivalent against 120 µl antiserum. In double radial immunodiffusion use a rosette arrangement with 10 µl antiserum in 3 mm diameter center well and 2 µl plasma samples (neat and serially diluted) in 2 mm diameter peripheral wells. In single radial immunodiffusion use 1 percent antiserum in the gel.	
Packing	Vial with 1 ml lyophilized antiserum.	
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
Handling	The lyophilized antiserum is shipped at ambient temperature and may be stored at +4°C; prolonged storage at or below -20°C. Reconstitute the lyophilized antiserum by adding 1 ml sterile distilled water. Dilutions may be prepared by adding phosphate buffered saline (PBS, pH 7.2). Repeated thawing and freezing should be avoided. If a slight precipitation occurs upon storage, this should be removed by centrifugation. It will not affect the performance of the antiserum. Diluted antiserum should be stored at +4°C, not refrozen, and preferably used the same day.	
Caution	This antiserum 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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