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Polyclonal Antibody to Human IgG1+ IgG2 + IgG3 + IgG4 - Serum

Alternate names: Human Immunoglobulin G1, Human Immunoglobulin G2, Human Immunoglobulin G3, Human Immunoglobulin G4

Catalog No.: AP31455SU-N

Quantity: 4x0.5 ml

Host: Sheep

Immunogen: Purified homogenous IgG1, IgG2 IgG3 and IgG4 respectively are isolated from human serum. Freund's complete adjuvant is used in the first step of the immunization procedure.

Format: **State:** Delipidated, heat inactivated lyophilized stable whole serum
Buffer System: No preservative added, as it may interfere with the antibody activity. No foreign protein added.
Reconstitution: Restore by adding 0.5 ml sterile distilled water to each vial.

Applications: In precipitating techniques as immunoelectrophoresis and double radial immunodiffusion to identify and measure the concentration of IgG subclasses in serum or other body fluids. Human IgG constitutes about 75% of the total Immunoglobulins in the serum of normal adults. It consists of four subclasses which are distinguished in isotypic heterogeneity of the gamma chains, and in physicochemical, biological and effector properties. The term "subclass" designates the high degree of homology in amino acid sequences and antigenic structure. In normal adult serum, the approximate percentage composition of IgG with respect to its subclasses is: IgG1: 65%, IgG2: 23%, IgG3: 8% and IgG4: 4%. All four subclasses appear in both isotypes of the light chain. Normal serum thus contains eight different molecular forms of IgG, the absolute and relative distribution being genetically controlled and resulting from individual responses to the antigenicity of the environment. Antigenic determinants carrying isotypic subclass specificity can be situated on any of the three structurally very similar sub-regions o the gamma chains, known as "domains". In IgG, some antigenic determinants are shared by two or three subclasses, but not by all four. Consequently, antibodies to such determinants will not be strictly subclass-specific. For the identification of subclasses of human IgG in cells and tissues by immunofluorescence or immunocytochemical peroxidase techniques, or in body fluids by ELISA and Western blotting type procedures, monoclonal antibody reagents to the individual subclasses are available.
Directions for use:
Because of their characteristics and those of the subclass-specific antigenic determinants, the use of these antisera requires special precautions. Their specificity and reactivity depend largely on the conditions of the test system in which they are applied. The performance of polyclonal subclass-specific antisera is guaranteed when they are used for the purposes described in RWP 5E/88, applying the special immunoprecipitation

arrangement recommended for these purposes. In immunoelectrophoresis use 2 µl 1/8, 1/16 and 1/32 dilutions of pathological serum or equivalent against 60 µl antiserum. In double radial immunodiffusion use a rosette arrangement with 10 µl antiserum in 3 mm diameter center well and 2 µl serum samples (neat and serially diluted) in 2 mm diameter peripheral wells. We also makes available a human standard serum with assigned values of the subclasses of IgG.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:

The activity of the antisera are directed to the respective human IgG subclass. It does not react with any non-Ig protein in human serum, as tested by immunoelectrophoresis and double radial immunodiffusion.
Cross-reactivity: Inter-species cross-reactivity is a normal feature of antibodies to immunoglobulins, since Ig of different species frequently share antigenic determinants. Cross-reactivity of this antiserum has not been tested in detail.
Species: Human.
Other species not tested.

Storage:

Prior to reconstitution store at 2-8°C.
Following reconstitution store undiluted at 2-8°C for one week
or (in aliquots) at -20°C for longer.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.