**BACKGROUND**

IgG is a monomeric immunoglobulin. It is the most abundant immunoglobulin and is found in the blood and extracellular fluid. There are four subclasses of IgG: IgG1, IgG2, IgG3, and IgG4. IgG is composed of two heavy chains (γ chains) and two light (κ or λ) chains. The chains form two domains, the Fab (antigen binding) fragment and the Fc (constant) fragment. Each IgG Fab fragment has two antigen binding sites. IgG molecules are involved in secondary immune response. They bind to different kinds of pathogens, such as viruses, bacteria, and fungi, and protect the body by complement activation (the classical pathway), opsonization for phagocytosis, and neutralization of toxins. In addition, IgG is the only isotype that can pass through the placenta, thereby providing protection to the fetus in the first few weeks of life, before the immune system of the fetus has developed.

**CHROMOSOMAL LOCATION**

Genetic locus: IGHG3 (human) mapping to 14p13.

**SOURCE**

IgG (3E8) is a mouse monoclonal antibody raised against purified IgG of human origin.

**PRODUCT**

Each vial contains 100 µg IgG1 kappa light chain in 1.0 ml of PBS with <0.1% sodium azide, 0.1% gelatin and <0.1% stabilizer protein.

**APPLICATIONS**

IgG (3E8) is recommended for detection of IgG of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:1000), immunoprecipitation (1 µg per 100-500 µg of total protein (1 ml of cell lysate)), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:30, dilution range 1:30-1:3000). Molecular Weight of IgG light chain: 25 kDa. Molecular Weight of IgG heavy chain: 50 kDa.

Positive Controls: human plasma extract: sc-364374.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml), 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

**STORAGE**

Store at 4°C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**DATA**

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

For research use only, not for use in diagnostic procedures.