

Human IgG - Purified Immunoglobulin

Product information, P100, 051013 version A

Storage and stability

Prior to reconstitution, store at 2-8 °C. After reconstitution, store aliquots at -20 °C. If not reconstituted, store at 2-8 °C. Repeated freezing is not recommended. Immunoglobulin G (IgG) is a very stable protein and can be used under long periods of time.

Pack size

250 mg
25 mg

Product number

P100-250
P100-25

Content info

Appearance: Lyophilized white powder	
Protein content: > 95 mass %	(Determined by A_{280})
Water content: ≤ 10 % by weight	(Determined by $\Delta M \rightarrow \Delta$)
Purity: > 95 %	SDS-PAGE (see figure 1)

General information about IgG

IgG, a 150 kDa protein, is the most common type of antibody comprising about 80% of the body's total amount of antibodies. Its distribution is equally divided between the blood and interstitial fluid. This protein has four IgG subclasses. The subclasses differ with respect to the number of inter-heavy chain disulfide bonds in the hinge region. In addition, the structural differences between the subclasses are also reflected in their susceptibility to proteolytic activities of enzymes, such as papain, plasmin, trypsin and pepsin. The concentration of IgG in human serum is in the range of 6.7-15.5 mg/ml (dependent on the physiological state of the body and age). The variation of the serum concentrations of the human IgG subclasses are as follows: $[IgG_1] > [IgG_2] > [IgG_3] = [IgG_4]$. The isoelectric point (pI) of IgG is found in the range of 6.4 to 9.0 [1].

Product description

Unspecific IgG has many applications and can be used in different assays and laboratory techniques such as ELISA, immunoelectrophoresis and immunoblottings. It is used as a reference antigen, standard, coating protein or blocking agent. Human IgG is isolated from normal, human plasma and purified with affinity chromatography and has more than 95 % purity. The final preparation is an essentially salt free lyophilized powder.

Reconstitution

The product is delivered as a lyophilized powder which is essentially salt-free. Reconstitution should be done in a suitable buffer to a minimum concentration of 1 mg/ml. After reconstitution, protein concentration can be determined employing absorbance measurements at 280 nm or by a protein determination kit.

Biohazard

Complete assurance that infectious agents are absent is not offered by any known test method. This product should be handled using the same safety precautions

employed when handling any potentially infectious material. Refer to MSDS (Material Safety Data Sheet). Source material has been tested and found negative for antibody to HIV (Human Immunodeficiency Virus), antibody to HCV (Hepatitis C Virus) and for HbsAG (Hepatitis B Surface Antigen).

Precautions and Disclaimer

This product is only intended for laboratory use. It is not intended for use in drugs, households or other areas. It is non toxic.

Technical service

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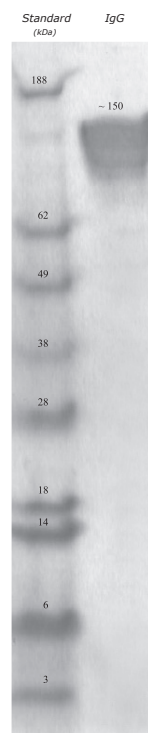


Figure 1.
SDS-PAGE (denaturing conditions) on purified human IgG from pooled human plasma with molecular weight markers at 188, 62, 49, 38, 28, 18, 14 and 6 kDa respectively. A visible band at 150 kDa represents the purified IgG product.

References

[1] Li G, Stewart R, Conlan B, Gilbert A, Roerth P, Nair H. Purification of human immunoglobulin G: a new approach to plasma fractionation. *Vox Sanguinis* (2002) **83**, 332-338.