

Product Information

IgA from human colostrum

reagent grade

Catalog Number **I2636**

Product Description

Purified human IgA is produced by precipitation and gel filtration techniques using normal human colostrum as the starting material. The colostrum was tested and found negative for antibodies to HIV and for HBsAg.

Identity and purity of the human IgA is established by immunoelectrophoresis (IEP).

Electrophoresis of the immunoglobulin preparation followed by diffusion versus anti-human whole serum and anti Human IgA results in a single arc of precipitation.

Human IgA exists in two forms. It is a monomer in the serum and a dimer in mucosal secretory tissues [secretory IgA (sIgA)]. Secretory IgA is a complex comprising two IgA monomers, a connecting J chain, and a secretory component. Its function is to provide protective immunity to the vulnerable mucosal surfaces by preventing invasion of inhaled and ingested pathogens.¹⁻³ Monomeric serum IgA functions as an anti-inflammatory antibody by interacting with FcαR (CD89) on immune effectors cells. This interaction functions as a second line of defense by eliminating pathogens that have breached the mucosal surface. Serum IgA can activate a variety of effector mechanisms such as antibody-dependent-cell-mediated cytotoxicity (ADCC), phagocytosis by cells of the myeloid lineage including monocytes, macrophages, neutrophils and eosinophils, respiratory burst activity by polymorphonuclear leukocytes and degranulation of eosinophils and basophils. However, serum IgA is a poor activator of complement.¹⁻³

Reagent

Supplied as a solution in 0.01 M Tris-HCl, 0.1 M NaCl, pH 8.0, containing 15 mM sodium azide as a preservative.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Potential Biohazard

Handle as if capable of transmitting infectious agents. Refer to the Material Safety Data Sheet.

Storage

Store at -20 °C. For continuous use, store at 2-8 °C for up to one month. For extended storage, the solution may be frozen in working aliquots at -20 °C. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

Product Profile

Protein: 1.6-2.4 mg/ml by absorbance at 280 nm
($E_{280}^{1\%} = 13.0$).

Purity: ≥95% (HPLC)

References

1. Snoeck, V., *Vet. Res.*, **37**, 455-7 (2006).
2. Slack, E., *Frontiers in Immunology.*, **3**, Article 100 (2012).
3. Spencer, J., *Frontiers in Immunology.*, **3**, Article 108 (2012)

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