

Protein G

#R00016

Size: 5 mg/50 mg

Stability & Storage

- Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
- 12 months from date of receipt, -20 to -70 °C as supplied.
 - 1 month, 2 to 8 °C under sterile conditions after reconstitution.
 - 3 months, -20 to -70 °C under sterile conditions after reconstitution.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

Protein G is a bacterial protein derived from the cell wall of certain strains of b-hemolytic Streptococcci. It binds with high affinity to the Fc portion of various classes and subclasses of immunoglobulins from a variety of species. Protein G binds to all IgG subclasses from human, mouse and rat species. It also binds to total IgG from guinea pig, rabbit, goat, cow, sheep, and horse. Protein G binds preferentially to the Fc portion of IgG, but can also bind to the Fab region, making it useful for purification of F(ab') fragments of IgG. Due to it's affinity for the Fc region of many mammalian immunoglobulins, protein G is considered a universal reagent in biochemistry and immunology.

AA Sequence

LPKTDYKLILNGKTLKGETTTEAVDAATAEKVFKQYA
NDNGVDGEWTYDDATKTFTVTEKPEVIDASELTPAVT
TYKLIVINGKTLKGETTTEAVDAATAEKVFKQYANDNG

VDGEWTYDDATKTFTVTEKPEVIDASELTPAVTTYKLV
INGKTLKGETTTTKAVDAETAEKAFKQYANDNGVDGV
WTYDDATKTFTVTE

Reconstitution

Dissolve in distilled water or saline.

Product Specification

Accession	P19909
Source	Escherichia coli.
Molecular Weight	Approximately 21.8 kDa, a single non-glycosylated polypeptide chain containing 200 amino acids. But it migrates with an apparent molecular mass of 32 kDa in SDS-PAGE.
Protein per Gram Powder	See Label.
Concentration for 1 unity OD at 280 nm	0.728 mg/ml
Purity	> 96 % by SDS-PAGE and HPLC analyses.
Specificity	The recombinant Protein G is a genetically engineered protein containing 3 IgG-binding regions

of protein G. Cell wall binding region, cell membrane binding region and albumin binding region have been removed from the recombinant Protein G to ensure the maximum specific IgG binding. The recombinant Protein G is ideal for purification of polyclonal or monoclonal IgG antibodies. Protein G binds to various human, mouse and rat IgG subclasses (e.g., human IgG1, IgG2, IgG3, IgG4; mouse IgG2a, IgG2b, IgG3; rat IgG2a, IgG2c). It also binds to total IgG from cow, goat, sheep, house and rabbit.

Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
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Formulation	Lyophilized from additive free solution.
Endotoxin	Less than 0.1 EU/μg of Protein G as determined by LAL method.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at -20 °C.