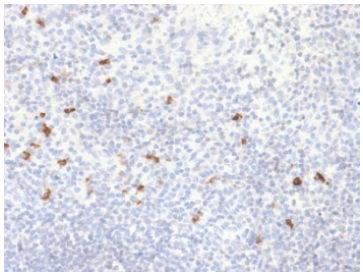
Recombinant IgG4 Antibody IGHG4/2042R / Rabbit Monoclonal [clone IGHG4/2042R] (V3695)

Catalog No.	Formulation	Size
V3695-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3695-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3695SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

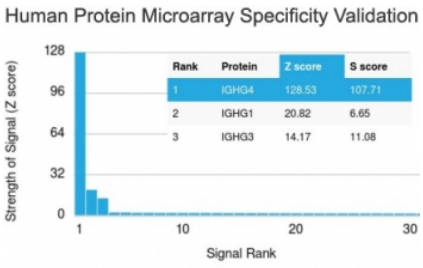
Recombinant RABBIT MONOCLONAL

Bulk quote request

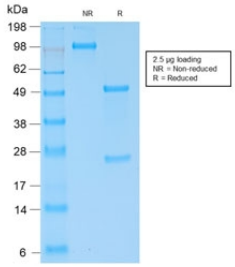
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	IGHG4/2042R
Purity	Protein A affinity chromatography
UniProt	P01861
Gene ID	3503
Localization	Cytoplasmic
Applications	Immunohistochemistry (FFPE): 0.5-1ug/ml for 30 min at RT Western blot: 2-4ug/ml
Limitations	This Recombinant IgG4 Antibody IGHG4/2042R is available for research use only.



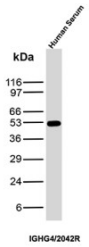
Recombinant IgG4 Antibody IGHG4/2042R Tonsil Tissue Immunohistochemistry. IHC testing of FFPE human tonsil with recombinant IgG4/IGHG4 antibody (clone IGHG4/2042R). HIER: boil sections in 10mM Tris with 1mM EDTA, pH9 for 10-20 min followed by cooling at RT for 20 min.



Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using recombinant IgG4/IGHG4 antibody (clone IGHG4/2042R). These results demonstrate the foremost specificity of the IGHG4/2042R mAb.
Z- and S- score: The Z-score represents the strength of a signal that an antibody (in combination with a fluorescently-tagged anti-IgG secondary Ab) produces when binding to a particular protein on the HuProt(TM) array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If the targets on the HuProt(TM) are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-scores. The S-score therefore represents the relative target specificity of an Ab to its intended target.



SDS-PAGE analysis of purified, BSA-free recombinant IgG4/IGHG4 antibody (clone IGHG4/2042R) as confirmation of integrity and purity.



Description

Recombinant IgG4 antibody targets Immunoglobulin G4, the gamma 4 subclass of human IgG encoded by the IGHG4 gene. Immunoglobulin G4 is structurally and functionally distinct from other IgG subclasses, exhibiting reduced complement activation and altered Fc receptor interactions. Because of these properties, a recombinant IgG4 antibody is widely used in immunology research focused on immune regulation, tolerance, and chronic antigen exposure.

Immunoglobulin G4 is preferentially produced during prolonged or repeated antigen stimulation and is commonly associated with non-inflammatory immune responses. A defining feature of IgG4 is Fab arm exchange, a process that generates functionally monovalent antibodies and limits immune complex formation. This unusual behavior contributes to the immunomodulatory role of IgG4 and makes a recombinant IgG4 antibody especially valuable for studying subclass-specific antibody structure and function.

Human IgG4 is a central marker in IgG4-related disease, a fibroinflammatory condition characterized by increased numbers of IgG4-positive plasma cells within affected tissues. Elevated IgG4 expression has been reported in organs such as pancreas, salivary glands, lymph nodes, and other sites of chronic inflammation. Use of a recombinant IgG4 antibody supports research into the pathogenesis of IgG4-related disease and the biology of IgG4-expressing plasma cells.

In allergic disease and allergen immunotherapy, Immunoglobulin G4 is often linked to immune tolerance and reduced hypersensitivity. IgG4 can function as a blocking antibody, interfering with IgE-mediated responses and contributing to long-term desensitization. A recombinant IgG4 antibody enables investigation of antibody subclass switching, immune adaptation, and mechanisms underlying tolerance induction in allergic and inflammatory conditions.

Immunoglobulin G4 belongs to the immunoglobulin heavy chain constant region family and maintains conserved Fc

domain architecture while displaying subclass-specific functional characteristics. Detection with a recombinant IgG4 antibody provides a direct approach for analyzing IgG4 expression in immune tissues and experimental models. This reagent is useful for studies of plasma cell differentiation, chronic immune activation, and antibody subclass distribution. NSJ Bioreagents provides this recombinant IgG4 antibody for research applications requiring specific recognition of IgG4.

For subclass-specific detection of human IgG4, see our Human IgG4 Antibody for ELISA / Hinge Region IgG4 Detection Antibody page.

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the Recombinant IgG4 Antibody IGHG4/2042R to be titered up or down for optimal performance.

Immunogen

A human recombinant protein corresponding to the Fc region was used as the immunogen for this Recombinant IgG4 Antibody IGHG4/2042R.

Storage

Store the recombinant IgG4 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Copyright © NSJ Bioreagents. All rights reserved.