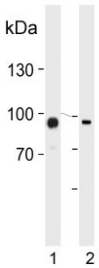
Protein-glutamine gamma-glutamyltransferase 2 Antibody / Transglutaminase 2 (F54953)

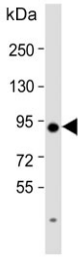
Catalog No.	Formulation	Size
F54953-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F54953-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

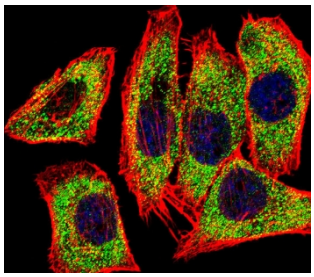
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Purified
UniProt	P21980
Localization	Cytoplasmic and cell surface
Applications	Western blot: 1:500-1:1000 Immunofluorescence: 1:10-1:50 Immunohistochemistry (FFPE): 1:10-1:50
Limitations	This Protein-glutamine gamma-glutamyltransferase 2 antibody is available for research use only.



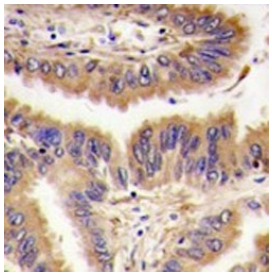
Protein-glutamine Gamma-glutamyltransferase 2 Antibody Human Endothelial and Leukemia Cell WB. Western blot analysis of human cell lysates using Protein-glutamine Gamma-glutamyltransferase 2 antibody. Lane 1: HUVEC cells; Lane 2: K562 cells. A specific immunoreactive band is detected at approximately 78 kDa in both lysates, consistent with the predicted molecular weight of Transglutaminase 2. Differences in band intensity reflect varying expression levels between the endothelial and leukemia cell lines. This antibody is suitable for investigating Protein-glutamine Gamma-glutamyltransferase 2 expression in studies of cell adhesion, extracellular matrix remodeling, vascular biology, and cancer research.



Protein-glutamine Gamma-glutamyltransferase 2 Antibody Human HeLa Cell WB. Western blot analysis of human HeLa cell lysate using Protein-glutamine Gamma-glutamyltransferase 2 antibody. A specific immunoreactive band is detected at approximately 78 kDa, consistent with the predicted molecular weight of Transglutaminase 2. The prominent band demonstrates robust expression of Protein-glutamine Gamma-glutamyltransferase 2 in HeLa cells and supports the utility of this antibody for investigating cell adhesion, extracellular matrix remodeling, intracellular signaling, and cancer biology.



Protein-glutamine Gamma-glutamyltransferase 2 Antibody Human U-251 Cell IF. Immunofluorescent staining of fixed and permeabilized human U-251 cells using Protein-glutamine Gamma-glutamyltransferase 2 antibody (green). Nuclei were counterstained with DAPI (blue), and actin filaments were visualized with an anti-Actin antibody (red). Protein-glutamine Gamma-glutamyltransferase 2 exhibits abundant predominantly cytoplasmic staining with a punctate distribution throughout the cells, while minimal nuclear signal is observed. The localization pattern is consistent with the known intracellular distribution of Transglutaminase 2 and demonstrates the utility of this antibody for investigating protein localization, cytoskeletal interactions, and extracellular matrix remodeling.



Protein-glutamine Gamma-glutamyltransferase 2 Antibody Human Lung Carcinoma IHC. Immunohistochemical staining of FFPE human lung carcinoma tissue using Protein-glutamine Gamma-glutamyltransferase 2 antibody following heat-induced epitope retrieval in pH6 citrate buffer. Moderate to strong cytoplasmic and membranous immunoreactivity is observed in the malignant epithelial cells, while adjacent stromal elements exhibit comparatively weaker staining. The staining pattern is consistent with the known expression of Transglutaminase 2 in epithelial tumors and demonstrates the utility of this antibody for investigating tumor biology, cell adhesion, extracellular matrix remodeling, and cancer progression.

Description

Protein-glutamine Gamma-glutamyltransferase 2 Antibody / Transglutaminase 2 recognizes Protein-glutamine gamma-glutamyltransferase 2, more commonly known as Transglutaminase 2 (TGM2), a multifunctional enzyme that catalyzes calcium-dependent protein crosslinking while also functioning as a signaling and structural protein. Although widely referred to as Transglutaminase 2 in the scientific literature, the Protein-glutamine gamma-glutamyltransferase 2 designation reflects its enzymatic role in forming covalent crosslinks between glutamine and lysine residues within target proteins. The protein is broadly expressed in epithelial, endothelial, stromal, and immune cells and is present in both intracellular compartments and the extracellular matrix. A Protein-glutamine Gamma-glutamyltransferase 2 Antibody / Transglutaminase 2 provides an effective tool for examining protein expression, localization, and regulation across a wide range of biological systems.

Protein-glutamine gamma-glutamyltransferase 2 contributes to extracellular matrix stabilization, cell adhesion, migration, differentiation, apoptosis, and wound repair through both enzymatic and non-enzymatic mechanisms. In addition to its transamidase activity, the protein functions as a GTP-binding molecule and signaling scaffold that interacts with fibronectin, integrins, growth factor receptors, and cytoskeletal proteins. These diverse activities allow Transglutaminase 2 to coordinate cellular responses to tissue injury, mechanical stress, inflammation, and extracellular matrix remodeling while maintaining tissue integrity under physiological conditions.

Altered expression or activity of Protein-glutamine gamma-glutamyltransferase 2 has been associated with numerous pathological conditions, including fibrosis, cancer, autoimmune disease, cardiovascular disorders, and neurodegeneration. Increased Transglutaminase 2 activity promotes extracellular matrix accumulation and fibrotic remodeling, while elevated expression in many tumors has been linked to epithelial-mesenchymal transition, tumor

invasion, metastasis, and resistance to therapy. The protein is also recognized as the principal autoantigen in celiac disease, making it an important target for studies of immune-mediated intestinal pathology. A Protein-glutamine Gamma-glutamyltransferase 2 Antibody / Transglutaminase 2 supports investigations into these diverse disease mechanisms while enabling reliable detection of this multifunctional enzyme.

Protein-glutamine gamma-glutamyltransferase 2 antibodies are suitable for applications including Western blotting, immunohistochemistry, immunofluorescence, flow cytometry, immunoprecipitation, and related protein detection methods when validated for the specific application. Because Transglutaminase 2 functions in multiple cellular compartments and exists in distinct conformational states, appropriate controls and application-specific optimization are recommended. NSJ Bioreagents provides carefully validated antibodies to support investigations of extracellular matrix biology, fibrosis, autoimmune disease, cancer progression, and tissue remodeling. A Protein-glutamine Gamma-glutamyltransferase 2 Antibody / Transglutaminase 2 is a valuable research reagent for detecting Transglutaminase 2 and advancing studies of protein crosslinking, cell adhesion, extracellular matrix organization, and disease-associated tissue remodeling.

Visit our TGM2 Antibody / Transglutaminase 2 Antibody page to explore additional validated antibodies and research tools for investigating TGM2 expression, extracellular matrix remodeling, cell adhesion, fibrosis, and cancer progression.

Application Notes

The stated application concentrations are suggested starting points. Titration of the Protein-glutamine gamma-glutamyltransferase 2 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 429-458 from the human protein was used as the immunogen for the Protein-glutamine gamma-glutamyltransferase 2 antibody.

Storage

Aliquot the Protein-glutamine gamma-glutamyltransferase 2 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

Protein-glutamine Gamma-glutamyltransferase 2 antibody, Transglutaminase 2 antibody, TGM2 antibody, TG2 antibody, Tissue Transglutaminase antibody, Transglutaminase C antibody

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