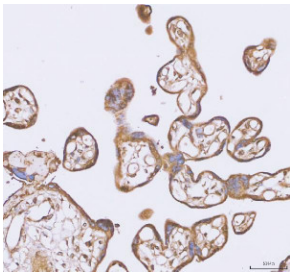
TGM2 Antibody / Transglutaminase 2 Antibody (R32370)

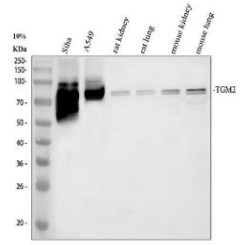
Catalog No.	Formulation	Size
R32370	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P21980
Localization	Cytoplasmic, cell surface
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml
Limitations	This TGM2 Antibody / Transglutaminase 2 Antibody is available for research use only.



TGM2 Antibody Human Placenta IHC. Immunohistochemical staining of FFPE human placenta tissue using TGM2 Antibody / Transglutaminase 2 Antibody following heat-induced epitope retrieval in pH8 EDTA buffer. The antibody was applied at 2 ug/ml and detected using an HRP-conjugated secondary antibody with DAB chromogen. Distinct membranous and cytoplasmic immunoreactivity is observed in trophoblastic cells, while surrounding stromal elements exhibit comparatively weaker staining. The staining pattern is consistent with the known expression of Transglutaminase 2 in placental tissue and demonstrates the utility of this TGM2 Antibody for investigating cell adhesion, extracellular matrix remodeling, and placental biology.



TGM2 Antibody Human Cancer Cell and Rodent Tissue WB. Western blot analysis of human cancer cell lysates and rodent tissue lysates using TGM2 Antibody / Transglutaminase 2 Antibody. Lane 1: human SiHa cells; Lane 2: human A549 cells; Lane 3: rat kidney; Lane 4: rat lung; Lane 5: mouse kidney; Lane 6: mouse lung. A specific immunoreactive band is detected at approximately 77 kDa in all samples, consistent with the expected molecular weight of Transglutaminase 2. Stronger expression is observed in the human cancer cell lines, while rat and mouse tissues exhibit readily detectable bands at the expected size. This TGM2 Antibody is suitable for investigating Transglutaminase 2 expression in studies of cancer biology, extracellular matrix remodeling, and cell adhesion across multiple species.

Description

TGM2 Antibody / Transglutaminase 2 Antibody recognizes transglutaminase 2 (TGM2), a multifunctional enzyme that catalyzes calcium-dependent protein crosslinking through transamidation reactions while also performing non-enzymatic signaling functions. TGM2 is the best-characterized member of the transglutaminase family and is widely expressed in epithelial cells, fibroblasts, endothelial cells, immune cells, and many other tissues. In addition to its intracellular activities, the protein is secreted into the extracellular matrix where it contributes to matrix organization, cell adhesion, tissue remodeling, and wound repair. Beyond its transamidase activity, TGM2 functions as a GTP-binding protein, protein scaffold, and signaling regulator, allowing it to influence diverse physiological processes. A TGM2 Antibody / Transglutaminase 2 Antibody enables researchers to investigate protein expression, localization, and regulation across numerous biological systems.

TGM2 participates in a wide range of cellular functions including extracellular matrix stabilization, apoptosis, autophagy, cell survival, migration, differentiation, and responses to cellular stress. Its enzymatic activity is tightly regulated by intracellular calcium and guanine nucleotides, permitting TGM2 to switch between catalytically active and inactive conformations depending on the cellular environment. The protein also interacts with fibronectin, integrins, growth factor receptors, and cytoskeletal components to regulate adhesion-dependent signaling and communication between cells and their surrounding matrix. Through these activities, Transglutaminase 2 contributes to tissue repair, maintenance of structural integrity, inflammatory responses, and adaptation to physiological stress, making it an important mediator of both normal tissue homeostasis and pathological remodeling.

Altered TGM2 expression or activity has been implicated in numerous diseases, including fibrosis, cancer, neurodegenerative disorders, cardiovascular disease, autoimmune conditions, and chronic inflammation. Elevated Transglutaminase 2 activity has been associated with increased extracellular matrix deposition and progressive fibrotic remodeling in organs such as the liver, lung, kidney, and heart. In oncology, TGM2 has been linked to epithelial-mesenchymal transition, tumor cell survival, metastasis, therapeutic resistance, and remodeling of the tumor microenvironment. The protein is also well known as the primary autoantigen recognized in celiac disease, making it an important target for studies of autoimmune pathogenesis and diagnostic biomarker development. A TGM2 Antibody / Transglutaminase 2 Antibody supports investigations into these diverse biological processes while helping researchers better understand the mechanisms underlying tissue remodeling and disease progression.

TGM2 antibodies are suitable for applications including Western blotting, immunohistochemistry, immunofluorescence, flow cytometry, immunoprecipitation, and related protein detection methods when validated for the individual application. Because Transglutaminase 2 exists in multiple conformational and functional states and may localize intracellularly or within the extracellular matrix, application-specific optimization and appropriate experimental controls are recommended. NSJ Bioreagents provides carefully validated antibodies to support investigations of extracellular matrix biology, cell adhesion, fibrosis, cancer progression, autoimmune disease, and tissue remodeling. A TGM2 Antibody / Transglutaminase 2 Antibody is a valuable research reagent for detecting Transglutaminase 2 and advancing studies of protein crosslinking, extracellular matrix organization, cellular signaling, and disease-associated tissue remodeling.

Explore our Cancer Antibodies page to discover validated antibodies for TGM2 and other proteins involved in tumor

progression, cell survival, metastasis, extracellular matrix remodeling, and cancer signaling research.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the TGM2 Antibody / Transglutaminase 2 Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Amino acids LERCDLELETNGRDHHTADLCREKLVVR were used as the immunogen for this TGM2 antibody.

Storage

After reconstitution, the TGM2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

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

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