

Product Datasheet

Transglutaminase 2/TGM2 Assay Kit (Colorimetric) NBP1-37008

Unit Size: 1 Plate

Storage of components varies. See protocol for specific instructions.

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NBP1-37008**Transglutaminase 2/TGM2 Assay Kit (Colorimetric)**

Product Information	
Unit Size	1 Plate
Concentration	Concentration is not relevant for this product. Please see the protocols for proper use of this product.
Storage	Storage of components varies. See protocol for specific instructions.
Conjugate	HRP
Buffer	

Product Description	
Description	The Transglutaminase 2/TGM2 Assay Kit uses biotinylated T26 peptide (Biotin-pepT26) as the first substrate (amine-acceptor/acyl-donor) and an amine-donor/acyl-acceptor as a second substrate. Samples suspected of containing TG2 are incubated with calcium, dithiothreitol (DTT) and Biotin-pepT26 in the wells of microtiter plates containing the amine substrate. In the presence of TG2, the gamma carboxamide of the glutaminyl residue of the biotin-pepT26 is incorporated into the amine substrate to form biotinylated isopeptide bound. The system is coupled to Streptavidin labelled peroxidase (SAv-HRP). SAv-HRP is revealed using H ₂ O ₂ as HRP substrate and tetramethyl benzidine as electron acceptor (chromogen).
Gene ID	7052
Gene Symbol	TGM2
Species	All Species
Reactivity Notes	Use in Porcine reported in scientific publication PMID: 32431691
Specificity/Sensitivity	Measurement of tissue Transglutaminase (tTG/TG2) with low or no interference with other TGs isoforms.
Kit Components	Microtiter strips coated with amine substrate (12x8 strip microtiter wells), DTT (0.2 ml), EDTA (Negative Control) (1 ml), Reaction Buffer (Biotin-pepT26/CaCl ₂) (lyophilized), Enzyme Tracer (SAv-HRP) (50 ul), Wash Buffer 10X (30 ml), Diluent Buffer 10X (10 ml), HRP Substrate (12 ml), Blocking Reagent (12 ml), Opr0036 : Recombinant human TG2 (positive control) (lyophilized)
Notes	The kit is shipped on ice. Upon arrival, the DTT (R1), the Reaction Buffer (R3) and Enzyme Tracer (R4) should be stored at -20C. All the other components of the kit should be kept at 4C. When stored properly, these stock solutions are stable for at least 24 months. OTHER SUPPLIES REQUIRED: - Recombinant human TG2 - TG2 inhibitor. This is recommended as negative control for screening of TG2 inhibitors.

Product Application Details	
Applications	Functional
Recommended Dilutions	Functional

Publications

Doki Y, Nakazawa Y, Sukegawa M et al. Piezo1 channel causes lens sclerosis via transglutaminase 2 activation Experimental eye research 2023-12-01 [PMID: 37951336]

Panes-Fernandez J, Godoy PA, Gavilan J et al. TG2 promotes amyloid beta aggregates: Impact on ER-mitochondria crosstalk, calcium homeostasis and synaptic function in Alzheimer's disease Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie 2023-03-27 [PMID: 36989728] (Func, All)

Thomas K, Zondler L, Ludwig N et al. Glutamine prevents acute kidney injury by modulating oxidative stress and apoptosis in tubular epithelial cells JCI insight 2022-11-08 [PMID: 36107633] (Func, All)

Han MS, Jung YK, Kim GW, Han S Transglutaminase-2 regulates Wnt and FoxO3a signaling to determine the severity of osteoarthritis Sci Rep 2020-08-06 [PMID: 32764573]

Chen C, Smith AD, Cheung L et al. Potentiation of IL-4 Signaling by Retinoic Acid in Intestinal Epithelial Cells and Macrophages-Mechanisms and Targets Front Immunol 2020-05-05 [PMID: 32431691] (Porcine)

Jung HJ, Han EH, Jang IK et al. Effect of Tissue Transglutaminase on Steroid Resistance in T-Cell Acute Lymphoblastic Leukemia Anticancer Res. 2019-11-01 [PMID: 31704844]

Jung HJ, Chen Z, Wang M et al. Calcium blockers decrease the bortezomib resistance in mantle cell lymphoma via manipulation of tissue transglutaminase activities Blood 2012-03-15 [PMID: 22294726]

Thomas V, El Alaoui S, Massignon D, Clement S, Simonet F, Quash G. Development and evaluation of a modified colorimetric solid-phase microassay for measuring the activity of cellular and plasma (Factor XIII) transglutaminases. Biotechnol Appl Biochem. 43(Pt 3):171-9. 2006-03-01 [PMID: 16313237]

Perez Alea M, Kitamura M, Martin G, Thomas V, Hitomi K, El Alaoui S. Development of an isoenzyme-specific colorimetric assay for tissue transglutaminase 2 cross-linking activity. Anal Biochem. 389(2):150-6. 2009-06-15 [PMID: 19318081]





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Products Related to NBP1-37008

NBP2-52009-0.05mg	Recombinant Human Transglutaminase 2/TGM2 His Protein
236-EG-200	EGF [Unconjugated]
AF4376	Transglutaminase 2/TGM2 Antibody [Unconjugated]
210-TA-005	TNF-alpha [Unconjugated]

Limitations

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