

PRODUCT INFORMATION

Transglutaminase 2 Rabbit Monoclonal Antibody (Clone 013)

Item No. 37090

Overview and Properties

Contents:	This vial contains 50 or 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	TG2, TGase 2, TGM2, Tissue Transglutaminase 2
Immunogen:	Recombinant human TG2
Cross Reactivity:	(+) TG2
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-80°C (as supplied)
Stability:	≥1 year
Storage Buffer:	0.2 µm filtered solution in PBS
Clone:	013
Host:	Rabbit
Isotype:	IgG
Applications:	ELISA; the recommended starting dilution is 1:5,000-1:10,000. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Description

Transglutaminase 2 (TG2) is a calcium-dependent enzyme that is involved in a variety of biological activities.^{1,2} TG2 is composed of an N-terminal β sandwich containing integrin and fibronectin binding sites, a catalytic domain, a guanine nucleotide-binding site, and two C-terminal β-barrel domains.¹ It is ubiquitously expressed and is localized to the cytosol, cytoskeleton, endoplasmic reticulum, mitochondria, nucleus, cell surface, and extracellular space in a context-dependent manner.³ TG2 catalyzes post-translational modifications of proteins *via* inter- or intramolecular crosslinking of glutamine and lysine residues or transamidation of glutamine residues with polyamines such as spermidine (Item No. 14918).^{1,2} It also exhibits calcium-independent enzyme activities, including GTPase, protein kinase, and disulfide isomerase activities, and binds to several cell surface adhesion molecules in the extracellular matrix (ECM).^{1,4} TG2 acts on a wide variety of protein substrates that have roles in neurological, autoimmune, and metabolic diseases, as well as carcinogenesis. Cayman's Transglutaminase 2 Rabbit Monoclonal Antibody (Clone 013) can be used for ELISA.

References

1. Odii, B.O. and Coussons, P. Biological functionalities of transglutaminase 2 and the possibility of its compensation by other members of the transglutaminase family. *ScientificWorldJournal* **714561**, (2014).
2. Porta, R., Esposito, C., Metafora, S., *et al.* Mass spectrometric identification of the amino donor and acceptor sites in a transglutaminase protein substrate secreted from rat seminal vesicles. *Biochemistry* **30(12)**, 3114-3120 (1991).
3. Piacentini, M., D'Eletto, M., Farrace, M.G., *et al.* Characterization of distinct sub-cellular location of transglutaminase type II: Changes in intracellular distribution in physiological and pathological states. *Cell Tissue Res.* **358(3)**, 793-805 (2014).
4. Belkin, A.M. Extracellular TG2: Emerging functions and regulation. *FEBS J.* **278(24)**, 4704-4716 (2011).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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