

## Product Information

### Anti-Transglutaminase-2 (C-terminal)

produced in rabbit, affinity isolated antibody

Product Number **SAB4200073**

#### Product Description

Anti-Transglutaminase-2 (C-terminal) is produced in rabbit using as the immunogen a synthetic peptide corresponding to a sequence at the C-terminal of human transglutaminase-2 (TGM2) (GeneID 7052), conjugated to KLH. The corresponding sequence displays 79% identity in mouse and 74% identity in rat TGM2. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Transglutaminase-2 (C-terminal) specifically recognizes human transglutaminase-2 (TGM2). The antibody can be used in several immunochemical techniques including immunoblotting (~78 kDa), immunoprecipitation, immunofluorescence, and immunohistochemistry. Detection of the TGM2 band by immunoblotting is specifically inhibited by the TGM2 immunizing peptide.

Transglutaminase-2 (also known as TGM2, TG2), is a widely expressed, multifunctional protein with enzymatic and GTPase activities, involved in multiple cell functions, including cell adhesion and cell signaling.<sup>1</sup> TGM2 functions as a Ca<sup>2+</sup>-dependent enzyme capable of crosslinking both cytosolic and extracellular matrix proteins by catalyzing the formation of isopeptide bonds between lysine and glutamine residues. It has been suggested that the transamidase activity of TGM2 might be regulated through a G-protein coupled receptor-signaling pathway.

TGM2 is involved in the regulation of cytoskeletal structure, cell migration, apoptosis and cell-matrix adhesion. It is activated in response to tissue injury and plays an important role in wound healing and immune response.<sup>2</sup> TGM2 has been associated with the pathology of a number of human disorders. TGM2 is a major autoantigen in celiac disease, and altered TGM2 expression or activity may be associated with Alzheimer disease, arteriosclerosis, type-2 diabetes, and cancer metastasis in numerous forms of cancer.<sup>2-4</sup>

#### Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: ~1.5 mg/mL

#### Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

#### Storage/Stability

Store at -20 °C. For continuous use, the product may be stored at 2-8 °C for up to one month. For extended storage, freeze in working aliquots at -20 °C. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

#### Product Profile

Immunoblotting: a working antibody concentration of 1-2 µg/mL is recommended using U87 cell extracts.

Immunoprecipitation: a working antibody amount of 15-30 µg is recommended using human placenta extracts.

Immunofluorescence: a working antibody concentration of 2-4 µg/mL is recommended using U87 cells.

Immunohistochemistry: a working antibody concentration of 5-10 µg/mL is recommended using formalin-fixed and paraffin embedded human placenta.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

## References

1. Zemskov, E.A. et al., *Front. Biosci.*, **11**, 1057-1076 (2006).
2. Facchiano, F. et al., *Front. Biosci.*, **11**, 1758-1773 (2006).
3. Wang, D-S, et al., *Int. J. Clin. Exp. Pathol.*, **1**, 5-18 (2008).
4. Herman, J.F. et al., *Oncogene*, **25**, 3049-3058 (2006).
5. Hwang, J.Y. et al., *Cancer Res.*, **68**, 5849-5858 (2008).

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