Active Recombinant Human TGM2 Protein, His tagged

Cat. No. TGM2-036H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Active Recombinant Human TGM2 Protein with His tag was expressed in E.coli.
Species	Human
Source	E.coli
ProteinLength	1-465 aa
Description	Transglutaminases are enzymes that catalyze the crosslinking of proteins by epsilon-gamma glutamyl lysine isopeptide bonds. While the primary structure of transglutaminases is not conserved, they all have the same amino acid sequence at their active sites and their activity is calcium-dependent. The protein encoded by this gene acts as a monomer, is induced by retinoic acid, and appears to be involved in apoptosis. Finally, the encoded protein is the autoantigen implicated in celiac disease. Two transcript variants encoding different isoforms have been found for this gene.
Form	Liquid
Bio-activity	Activity is determined by measuring the rate of fluorescence enhancement after rhTG 2 catalyzed monodansylcadaverine-incorporation into N,N-dimethylated casein accor ding to Lorand et al., Anal. Biochem. 44 (221-231). 1 U is defined as the increase in fl uorescence intensity of 1 a.u./min (measured on a Cary eclipse fluorescence spectro photometer, Varian; λex = 332 nm, λem = 500 nm; band filter = 5 nm; detector strengt h = 600 V; temperature = 37 centigrade, assay volume = 1 mL)].

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Molecular Mass	53.3 kDa
AASequence	MAHHHHHHAEELVLERCDLELETNGRDHHTADLCREKLVVRRGQPFWLTLHFEGR NYEASVDSLTFSVVTGPAPSQEAGTKARFPLRDAVEEGDWTATVVDQQDCTLSLQL TTPANAPIGLYRLSLEASTGYQGSSFVLGHFILLFNAWCPADAVYLDSEEERQEYVLT QQGFIYQGSAKFIKNIPWNFGQFEDGILDICLILLDVNPKFLKNAGRDCSRRSSPVYV GRVVSGMVNCNDDQGVLLGRWDNNYGDGVSPMSWIGSVDILRRWKNHGCQRVK YGQCWVFAAVACTVLRCLGIPTRVVTNYNSAHDQNSNLLIEYFRNEFGEIQGDKSE MIWNFHCWVESWMTRPDLQPGYEGWQALDPTPQEKSEGTYCCGPVPVRAIKEGD LSTKYDAPFVFAEVNADVVD WIQQDDGSVHKSINRSLIVGLKISTKSVGRDEREDITH TYKYPEGSSEEREAFTRANHLNKL
Applications	rhTG2 catalyzes acyl transfer reactions from glutamine residues in proteins or peptides to primary amines, e. g. the formation of ε-(γ-glutamyl) lysine bonds between proteins by transferring the acyl group of a peptide-bound glutamine residue to the primary amino group of a peptide-bound lysine residue. rhTG2 may also be used for immunoprecipitation.
Notes	In order for the protein to be catalytically active, it is necessary to incubate the working solution with a reducing agent, preferably 20-30 mM DTT, for at least 30 min at room temperature, immediately before use. Intended for research use only, not for use in human, therapeutic or diagnostic applications.
Storage	Store at ≤ - 20 centigrade. Store working aliquots at ≤ - 20 centigrade. Avoid repeated freezing and thawing.
Activation	Activated with 10 mM Ca2+.
CAS	80146-85-6

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EC	EC 2.3.2.13

GENE INFORMATION

Gene Name	TGM2 transglutaminase 2 (C polypeptide, protein-glutamine-gamma-glutamyltransferase) [Homo sapiens]
Official Symbol	TGM2
Synonyms	TGM2; transglutaminase 2 (C polypeptide, protein-glutamine-gamma-glutamyltransferase); protein-glutamine gamma-glutamyltransferase 2; TGC; TG(C); TGase C; TGase H; TGase-2; TGase-H; C polypeptide; transglutaminase C; transglutaminase H; transglutaminase-2; tissue transglutaminase; protein-glutamine-gamma-glutamyltransferase; TG2; GNAH; G-ALPHA-h;
Gene ID	7052
mRNA Refseq	NM_004613
Protein Refseq	NP_004604
MIM	190196
UniProt ID	P21980

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