Human Transglutaminase 4/TGM4 Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF5760

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Transglutaminase 4 in direct ELISAs and Western blots. In direct ELISAs, approximately 5% cross-reactivity with recombinant human (rh) Transglutaminase 2, rhTransglutaminase 3, rhTransglutaminase 7, and recombinant mouse Transglutaminase 2 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant human Transglutaminase 4 Met2-Lys684 Accession # AAC50516
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

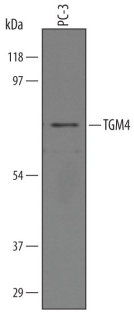
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below

DATA

Western Blot

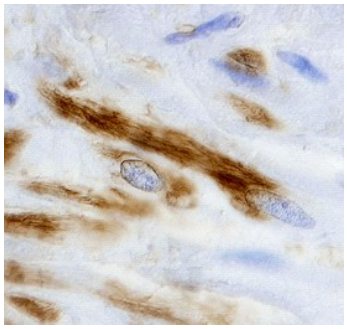


Detection of Human Transglutaminase 4/TGM4 by Western Blot. Western blot shows lysates of PC-3 human prostate cancer cell line. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Human Transglutaminase 4/TGM4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5760) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Transglutaminase 4/TGM4 at approximately 77 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

Immunohistochemistry

Transglutaminase 4/TGM4 in Human Prostate. Transglutaminase 4/TGM4 was detected in paraffin-embedded sections of human prostate using Sheep Anti-Human Transglutaminase 4/TGM4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5760) at 10 µg/mL overnight at 4 °C. Before incubation with the primary antibody tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

Immunohistochemistry



Transglutaminase 4/TGM4 in Human Prostate. Transglutaminase 4/TGM4 was detected in immersion fixed paraffin-embedded sections of human prostate using Sheep Anti-Human Transglutaminase 4/TGM4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5760) at 10 µg/mL overnight at 4 °C. Before incubation with the primary antibody tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

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PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

TGM4 (Transglutaminase 4; also TGP and Prostate-specific transglutaminase) is a 77 kDa member of the papain-like family of transglutaminases. It is expressed by various tumor cell lines plus prostatic epithelium, and may participate in semen protein modification. TGM4, like other TGMs, can apparently mediate transamidation, plus esterification reactions. Human TGM4 is 684 amino acids (aa) in length. Although it does not contain a signal sequence, based on rodent, it is likely secreted as a homodimer. TGM4 contains an active enzyme site between aa 263-353, and shows a C-terminal Ig-like domain (aa 587-684). The molecule has a requirement for divalent calcium. There are two potential splice variants. One shows a 45 aa insertion after Leu8, while another shows a 12 aa substitution for aa 1-80. Human full-length TGM4 shares only 54% aa identity with mouse TGM4.

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