

Product number **T250**
Revision number **RN1.2**

Product Name Andracon™ – Recombinant Microbial Transglutaminase
(HEPES-formulated, (frozen) liquid)

Synonyms EC 2.3.2.13; Protein-glutamine- γ -glutamyltransferase

Background info Andracon™ is a brand for high quality microbial transglutaminase:

- Recombinantly produced in *E. coli*
- Ultra-pure and highly active
- Batch to batch consistent quality
- License free
- Produced according to an SOP in an ISO9001:2015 certified environment

Andracon™ (Microbial Transglutaminase, MTG) catalyzes the acyl transfer reaction between γ -carboxamide groups of peptide-bound glutamine residues and a variety of primary amines.

Therefore, Andracon™ can be used to attach primary-amine coupled functional markers like biotin, fluorescent dyes, click chemistry reagents or cytotoxins to proteins, e.g. antibodies.

Essentially, Andracon™ is used for the production of antibody drug conjugates (ADCs).

Characterization Andracon™ is purified by a series of column chromatography steps. Final quality control includes a set of tests summarized below.

Parameter	Specification	Assay
Protein concentration	Report result	A280 ($\epsilon = 55,408 \text{ L}\cdot\text{mol}^{-1}\cdot\text{cm}^{-1}$)
Activity	Report result	Microbial Transglutaminase Assay Kit, Zedira
Specific activity	> 30 U/mg	Microbial Transglutaminase Assay Kit, Zedira
Purity by HPLC	> 98%	Anion exchange-HPLC
SDS-PAGE	Band at 38 kDa	12.5% SDS-PAGE, Coomassie stain
Endotoxin content	< 0.004 EU/U	Endotoxins Ph. Eur. 2.6.14 c.E.
Host cell protein content	< 0.15 ng/U	<i>E. coli</i> HCP ELISA Kit, Cygnus Technologies
Host cell DNA content	< 0.12 ng/U	Quant-iT™ Pico Green® dsDNA, Invitrogen
Sterility	No growth	Steritest™, Merck Millipore
Protein mass	Report result	HPLC-ESI-MS

Source Recombinantly produced in *E. coli*. Gene derived from *Streptomyces mobaraensis*.

TSE/BSE-Declaration The only material of animal origin within the MTG production process is lactose, used within the fermentation step. The lactose used is certified by the supplier to be TSE and BSE free. Lactose is not used in any further production or purification step. No other material of animal origin is used for MTG production and purification nor added to the product.

Molecular weight 38334.0 Da (theoretical, activated MTG with N-terminal sequence: FRAPDSDDR...)

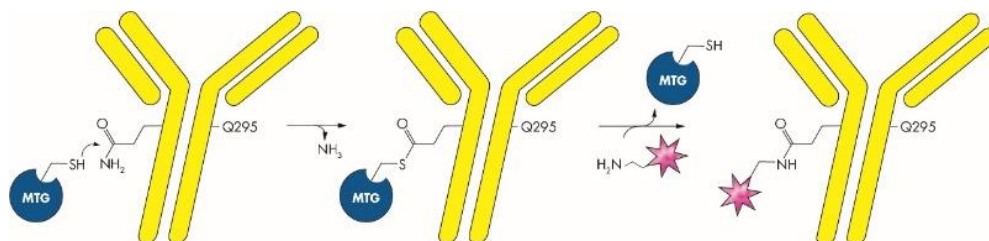
Formulation 50 mM HEPES pH 7.4

Appearance (Frozen) liquid

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Stability Andracon™ shows no activity loss when stored at -80°C and -20°C. Andracon™ can be stored at +6°C for at least 4 weeks without activity loss. Andracon™ is not susceptible to freeze-thawing, shown for ten freeze-thaw cycles.

Application Labeling, immobilisation, conjugation, and modification of proteins.



MTG reaction pathway for labeling of (deglycosylated) antibodies. Antibody heavy chains are conjugated with a drug (linked to a primary amine) by MTG on position Q295, resulting in an ADC with site specifically conjugated drug molecules. Here, the conjugation of only one Q295 is shown.

Storage Store at -80°C. Store working aliquots undiluted.
If storage at -80°C is not possible, storage at ≤ -20°C is recommended.

Related products

- T300 Andracon™ – Recombinant Microbial Transglutaminase (HEPES-formulated, lyophilized)
- Z009 ZediXclusive Microbial Transglutaminase Assay Kit
- A145 Polyclonal Antibody to Microbial Transglutaminase
- A143 Monoclonal Antibody to Microbial Transglutaminase (clone XM67)

See Zedira’s MTG Handbook or Zedira’s homepage for special substrates and further products.

Technical support For scientific and technical support, please contact us (contact@zedira.com)!

References

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NOTE INTENDED FOR RESEARCH USE ONLY, NOT FOR USE IN HUMAN, THERAPEUTIC OR DIAGNOSTIC APPLICATIONS.