

Title (en)

METHOD FOR TRANSGLUTAMINASE-CATALYZED COUPLING OF PROTEIN OR PEPTIDE TO A SUPPORT

Title (de)

VERFAHREN ZUM TRANSGLUTAMINASE-KATALYSIERTEN KOPPELN VON PROTEIN ODER PEPTID AN EINEN TRÄGER

Title (fr)

PROCEDE POUR LA FIXATION, CATALYSEE PAR LA TRANSGLUTAMINASE, D'UNE PROTEINE OU D'UN PEPTIDE SUR UN SUPPORT

Publication

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Application

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Abstract (en)

[origin: DE19732917C1] The invention relates to a method for transglutaminase-catalyzed coupling of protein or peptide to a support, while retaining at least 50 % of the biological activity of the protein or peptide. The invention also relates to the immobilized proteins coupled to the support and the support/protein conjugations obtained by this method, as well as to their use. A method already exists for simultaneously immobilizing enzymes with supports by means of transglutaminase-catalyzed coupling. This method is, however, not suitable for enzymes having polymer substrate molecules. Further attempts to bond enzymes with polymer substrates to ion-exchanging materials, and to stabilize them with transglutaminase, resulted in immobilized products with very low activity. The new method enables the production of immobilized proteins coupled to the support and support/protein conjugations, while retaining at least 50 % of the biological activity of the protein or peptide. In accordance with the invention, proteins or peptides are coupled to a support under the effect of transglutaminase. To this end, the support is brought into contact with the protein or peptide that is to be coupled, and with the transglutaminase. The support and the protein act as acyl and/or amine donors, and are suitable for use as transglutaminase substrates.

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