Elucidating the Distinctions Between Open-State Monomers and Dimers of Human Tissue Transglutaminase

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Celiac sprue

Stages of molecular mechanism:
1) Partial proteolysis
2) Transport of oligopeptides
3) Connection to tissue transglutaminase (TG2)
4) Interaction with APC cells
5) Autoimmune reaction
Deamidation and transamidation

Opening up about Tissue Transglutaminase: When Conformation Matters More than Enzymatic Activity
Open and closed form of TG2

Opening up about Tissue Transglutaminase: When Conformation Matters More than Enzymatic Activity
Oligomers of TG2

3 models of open-form TG2 dimer by HDOCK
CRYSOL predictions

![Graph showing CRYSTAL predictions for open-form monomer and open-form dimer 1. The graph plots the decay of different species with increasing q value. The x-axis represents q values ranging from 0 to 0.5, and the y-axis represents the decay values ranging from 4.53999E-5 to 0.13534. The green line represents open-form monomer, and the orange line represents open-form dimer 1.]
CRYSOL predictions
CRYSOL predictions

![Graph showing CRY杉OL predictions with two curves labeled Open-form dimer 1 and Open-form dimer 2. The x-axis represents q values, and the y-axis shows the corresponding probabilities.](image-url)
Protein extraction and purification
Thank you for your attention