

Title:
Trick or Treat?
Study of Glycation and Advanced Glycation of a Humanized Monoclonal
Antibody

CHM644
March 30th 2012

By Hong Liu

Abstract:

Protein glycation is known as a nonenzymatic glycosylation that usually takes place in the ϵ -amino groups of lysine residues and α -amino groups of amino-terminal residues on protein by reaction with reducing sugar such as glucose, fructose etc.

In the past decades, there is an increasing number of recombinant humanized monoclonal antibodies (rhuMAbs) applied for therapeutic application due to their high specificity and affinity to antigen targets therefore blocking biology pathways to treat certain disease. As a therapeutic protein, a rhuMAb also faces glycation modification from the manufacturing production to final clinical use. It is important to understand the impact of glycation on rhuMAb's therapeutic functions.

In the present work, the glycation adducts and advanced glycation end products (AGEs) on a recombinant humanized monoclonal antibody (rhuMAb) were studied to understand the glycation and advanced glycation effect on structural modification, thermal stability, bioactivity of a recombinant humanized monoclonal antibody (rhuMAb).

