

Top-Journal Breakthrough (IF=81.2): Cloud-Clone AGE ELISA Kit Helps Uncover Protein Glycation Modification

CEB353Ge kit delivers critical molecular evidence for phase 3 clinical trial evaluating recombinant human serum albumin for cirrhotic ascites

HUSTON, TX, UNITED STATES, October 22, 2026 /EINPresswire.com/ -- Against the backdrop of rapid advances in biomedical science, landmark publications in high-impact academic journals define cutting-edge research directions worldwide. On 10 September 2026, a research team from the Liver Research Center at Beijing Friendship Hospital, Capital Medical University, published findings from a multicenter, randomized, double-blind, active-controlled phase 3 clinical trial in *Signal Transduction and Targeted Therapy* (Impact Factor=81.2). Conducted across multiple clinical sites on patients with cirrhotic ascites, the study aimed to compare clinical performance between recombinant human serum albumin (rHSA) and plasma-derived human serum albumin (pHSA), and decipher glycation-driven molecular discrepancies between the two therapeutics. Researchers combined LC-MS molecular profiling with [Cloud-Clone's](#) in-house-developed Advanced Glycation End-product (AGE) [ELISA Kit](#) (Catalog No. CEB353Ge), which provided robust quantitative datasets revealing key differences in molecular integrity of the two albumin preparations. This work establishes that albumin therapeutic assessment should consider not only protein quantity but also intrinsic molecular quality for future clinical applications.

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A randomized, double-blind, active-controlled phase 3 multicenter trial of rHSA for cirrhotic ascites

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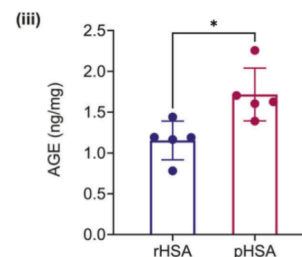
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Related Product

ELISA Kit for Advanced Glycation End Product (AGE)

Catalog No.: CEB353Ge



Sample: Albumin drug preparations: recombinant human serum albumin (rHSA) expressed in *Pichia pastoris* and plasma-derived human serum albumin (pHSA)
Application: ELISA

Figure 1. Cover snapshot of the landmark phase-3 clinical-trial paper published in Signal Transduction and Targeted Therapy (10 September 2026, IF=81.2). Cloud-Clone AGE ELISA Kit (CEB353Ge) supported molecular analysis within this study. Reference: Signal Transduct Target Ther. 2026 Sep 10;11:390. doi:10.1038/s41392-026-02951-7

1. Scientific Breakthrough Behind Top-Journal Publication: Reshaping Albumin Evaluation Criteria

Registered under trial ID NCT06553456, this phase 3 investigation enrolled 390 patients living with cirrhotic ascites. Designed with dual primary endpoints, the trial confirmed rHSA achieved equivalent serum-albumin elevation and non-inferior ascites-relief efficacy compared with conventional pHSA.

Notable insights emerged from exploratory endpoint analysis: glycated-albumin levels decreased by -12.24% within the rHSA cohort, whereas the pHSA group saw a +12.52% increase. This opposing trend attracted close scientific attention. Follow-up LC-MS characterization identified multiple non-enzymatic glycation sites on pHSA molecules. In contrast, rHSA produced via Pichia pastoris expression showed no detectable non-enzymatic glycation, demonstrating better-preserved, “younger” molecular integrity.

This finding highlights that future albumin therapeutic assessments should evaluate not only protein quantity, but also critical molecular quality. Precise quantification of AGE levels served as the core analytical cornerstone for this key conclusion.

2. Cloud-Clone CEB353Ge: Capturing Subtle Molecular-Level Biochemical Differences

High-sensitivity, high-specificity detection tools form the foundation of reliable experimental data for protein-glycation research. In this published study, researchers adopted Cloud-Clone in-house developed Advanced Glycation End-product (AGE) ELISA Kit (Catalog No. CEB353Ge).

Core Product Advantages

- 1.High Sensitivity & Specificity: Built on competitive-inhibition ELISA principle, CEB353Ge accurately quantifies AGE concentrations. It maintains minimal cross-reactivity and superior data reproducibility even within complex matrices such as finished albumin drug formulations.
- 2.Rigorous Quality Control: As a flagship Cloud-Clone product, this ELISA kit passes strict multi-step validation. Lot-to-lot stability enables standardized detection workflows for multicenter, large-sample clinical investigations.
- 3.Broad Application Scope: Beyond albumin-formula testing demonstrated in this trial, the kit supports research covering diabetic complications, ageing mechanisms, oxidative stress

品番	対応種	用途
NPB353Ge01	汎用	陽性コントロール、免疫原、SDS-PAGE、WB
APB353Ge01	汎用	細胞培養、活性アッセイ
PAB353Ge01	汎用	評価中
LAB353Ge71	汎用	WB、IHC、ICC
LAB353Ge81	汎用	IHC、ICC、ELISA
MAB353Ge21	汎用	評価中
HEB353Ge	汎用	高感度 AGE ELISA キット
CEB353Ge	汎用	AGE 競合 ELISA キット (今回論文使用製品)
LMB353Ge	汎用	マルチ因子磁気ルミネックスアッセイ
CMB353Ge	汎用	ビーズアレイ多項目同時測定キット
KSB353Ge11	汎用	ELISA 自作 DIY 試薬セット

profiling, and quality assessment for diverse protein therapeutics.

Experimental Data Validates Real-World Performance

As presented in Figure 4(iii) of the original article, measurements generated with CEB353Ge revealed statistically significantly lower AGE concentrations for rHSA relative to pHSA ($P < 0.05$). These readouts directly confirm that recombinant albumin avoids glycation-associated molecular damage during manufacturing and retains superior molecular integrity. This supplies strong molecular-biology evidence supporting rHSA clinical safety and validates Cloud-Clone kit performance for detecting fine biochemical discrepancies.

Figure 2. AGE quantification results obtained using CEB353Ge ELISA kit. Comparison of AGE content between *Pichia pastoris*-expressed recombinant human serum albumin (rHSA) and plasma-derived human serum albumin (pHSA). pHSA exhibited significantly higher AGE levels than rHSA ($P < 0.05$). Samples: finished albumin pharmaceutical preparations. Assay method: competitive-inhibition ELISA. Catalog No.: CEB353Ge. Data extracted from Signal Transduction and Targeted Therapy, published 10 September 2026.

3. Critical Biological Role of AGE in Disease Research & Biopharmaceutical Development

Advanced Glycation End-products (AGEs) are stable covalent compounds formed via non-enzymatic reactions between reducing sugars and biomolecules including proteins, lipids or nucleic acids. Basal AGE concentrations remain low under physiological conditions, yet AGEs accumulate substantially during diabetes, chronic kidney disease, liver cirrhosis and biological ageing.

AGE as Disease Biomarker

Upon binding to the RAGE receptor, accumulated AGEs trigger NF- κ B-mediated signalling cascades, driving inflammation and oxidative stress and inducing cellular injury. Reliable AGE measurement is therefore valuable for evaluating diabetic-complication risk, cardiovascular-disease progression and liver-disease severity.

Quality-Control Marker for Biopharmaceuticals

During recombinant-protein drug manufacturing (e.g. rHSA), host-cell metabolism, culture conditions and purification workflows may introduce unintended glycation modifications. Such alterations can change therapeutic half-life, immunogenic profile and biological activity. High-precision assays such as Cloud-Clone CEB353Ge are essential tools to monitor these critical quality attributes and safeguard drug safety and efficacy.

4. Why Choose Cloud-Clone: Globally Trusted Life-Science Reagent Supplier

Selecting knowledgeable, quality-focused reagent partners is vital to experimental success across life-science projects. Support for this high-impact IF = 81.2 publication represents another real-world validation of Cloud-Clone comprehensive technical strengths.

Validated by High-Impact Global Publications

This demanding clinical-sample research served as rigorous real-world testing for CEB353Ge performance. To date, Cloud-Clone reagents have been cited within more than 42 000 SCI-

indexed publications, including over 350 high-profile studies featured in Nature, Science, Cell and other leading journals. Extensive literature references confirm Cloud-Clone reagents support researchers worldwide pursuing cutting-edge scientific discovery.

Full-chain In-house R&D & Manufacturing Capabilities

Cloud-Clone prioritizes original, in-house innovation. Large-scale investment has built dedicated R&D and production centres for protein, antibody and kit development, supplemented by three SPF-grade animal housing facilities and one SPF-grade experimental site (total floor area >25000m²; SPF core area >8000m²).

This infrastructure underpins complete technical workflows covering peptide synthesis, protein expression & purification, antibody generation and final kit assembly. All core raw materials are 100% produced internally with full traceability. Independent in-house production secures stable supply capacity, enables strict batch-level raw-material oversight and consistently maintains high product quality.

Global Footprint & Internationally-Recognized Compliance Certifications

Cloud-Clone operates as an international enterprise with strict compliance frameworks. Products and services reach researchers across more than 50 countries, with long-term collaborative partnerships with globally recognized organizations. Quality-system accreditations include ISO9001, ISO13485, ISO14001, SPF and CMA. Cloud-Clone ELISA kits have also received the international CiteAB award for outstanding product performance. These credentials assure end-users of products and services aligned with global quality benchmarks.

Fast Response, Customization & Comprehensive Technical Support

Cloud-Clone prioritizes researcher requirements. The support team guarantees response within 24 hours and completed return-and-exchange handling within 72 hours. Beyond standard off-the-shelf reagents, custom-development services are available for project-specific experimental needs. Expert technical staff deliver end-to-end assistance spanning product consultation, application guidance, experimental design and data interpretation.

5. Cloud-Clone Total Solution Portfolio for AGE-focused Research

To meet diverse experimental requirements for AGE-related studies, Cloud-Clone provides the top-journal-validated CEB353Ge competitive-ELISA kit alongside a complete AGE-targeted product portfolio, encompassing antibodies, native / active proteins and multiplex detection platforms for streamlined one-stop research solutions.

Note: All products listed below are for research-use-only; not intended for clinical diagnostic applications.

Figure 3 List of Cloud-Clone AGE-related reagent products.

Published 10 September 2026, this Capital Medical University clinical study expands future clinical opportunities for recombinant human serum albumin and raises higher standards for molecular-quality monitoring of protein therapeutics. Cloud-Clone CEB353Ge AGE ELISA kit delivered critical analytical performance within this landmark investigation.

Moving forward, Cloud-Clone will keep pursuing precision, efficiency and innovation, delivering premium reagents and services for global investigators and facilitating more high-calibre

scientific outputs. Researchers conducting AGE-related studies or protein-drug quality-control projects are welcome to contact Cloud-Clone for detailed product consultation.

Disclaimer: Literature figures and dataset referenced are reproduced from Signal Transduction and Targeted Therapy (2026) 11:390. All product specifications are sourced from official Cloud-Clone Corp. documentation. Products are for research-use-only and are not for human clinical diagnosis.

About Cloud-Clone Corp.

Cloud-Clone Corp. is dedicated to the development and production of high-quality immunoassay reagents and detection solutions. With a focus on antibody engineering, multiplex assay development, and cross-platform compatibility, the company provides research tools designed to support precision medicine and advanced biomedical investigation globally. Our core products and services include the research and development of proteins, antibodies, ELISA kits, primary cells, and multiplex cytokine assay kits, as well as professional CRO services to fully meet the diverse needs of biomedical research and related fields.

For more information about Cloud-Clone Corp, visit www.cloud-clone.com.

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