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Technical Brief

Recombinant Human Chorionic Gonadotropin, Beta Subunit

Recombinant Human Chorionic Gonadotropin, Beta Subunit (ß-hCG) from Scripps Laboratories is now available for research use and diagnostic assay development. The ongoing global shortage in the supply of starting material for native hCG, which is the source of native ß-hCG, has severely impacted the availability of these critical reagents to the diagnostic industry. Scripps Laboratories offers highly purified recombinant ß-hCG as a reliable and economical alternative to native ß-hCG. The data presented here demonstrate its suitability for assay development and large-scale manufacturing of diagnostic assays.

SDS-PAGE

Figure 1 presents an SDS-PAGE of Recombinant ß-hCG. Gel staining indicates the protein is highly purified and runs at the expected molecular weight for glycosylated ß-hCG. In addition, Recombinant ß-hCG contains no visible contaminating proteins in the reduced/heated (lanes 1,2) and non-reduced/not heated (lanes 6,7) samples.

WESTERN BLOT

Western blot analysis demonstrates Recombinant ß-hCG is antibody-reactive under a variety of conditions. The data in Figure 2 show it retains its antibody-binding capabilities under several combinations of reduced/non-reduced and heated/not heated treatments. The gel was stained with a Scripps Laboratories ß-hCG monoclonal antibody, clone BC001, *Mat. No. MC097-90000*.

SDS-PAGE

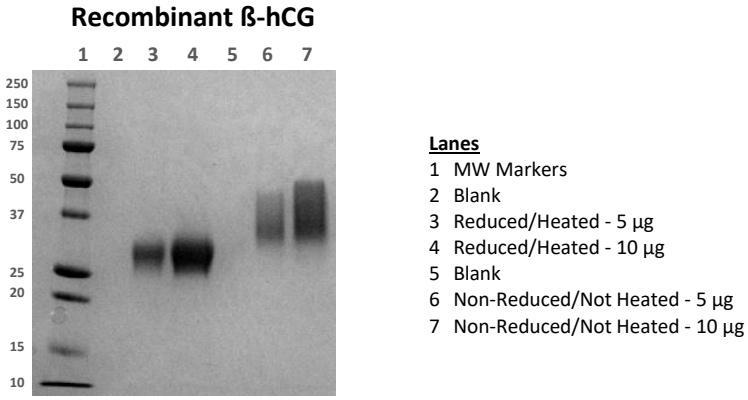

Figure 1. SDS-PAGE of Recombinant ß-hCG under reduced/heated (lanes 3,4) and non-reduced/not heated (lanes 6,7) conditions.

WESTERN BLOT

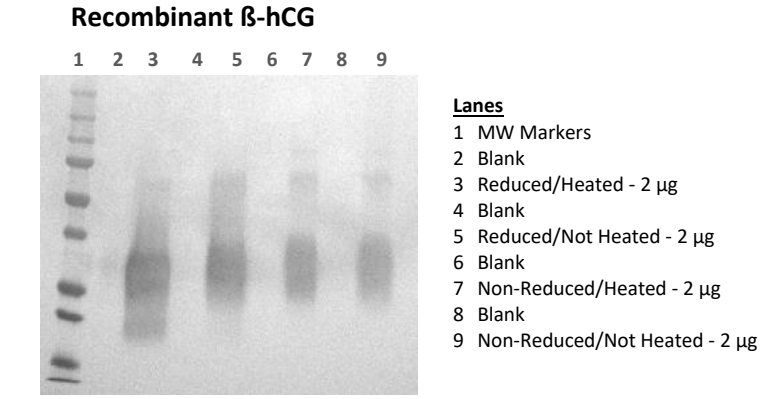

Figure 2. Western blot of Recombinant ß-hCG

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SDS-PAGE
GLYCOPROTEIN STAIN

Native hCG is a glycoprotein produced and glycated in the trophoblastic cells of the placenta during pregnancy. Both the α- and ß-subunits of hCG are known to be highly glycosylated. Recombinant ß-hCG from Scripps Laboratories is produced in a mammalian cell line and the image at right confirms it is glycosylated. Figure 3 is an SDS-PAGE of Recombinant ß-hCG, stained for glycoprotein. The gel shows significant glycosylation, as expected.

HPLC

Analyzed by HPLC, the profile of Recombinant ß-hCG in Figure 4 displays a single main peak with a retention time of 19.765 min. The profile confirms what is corroborated by SDS-PAGE: Recombinant ß-hCG is purified to a high extent and contains no significant contaminants.

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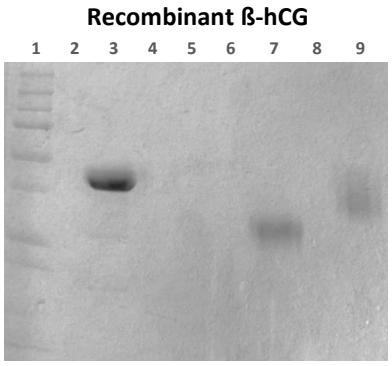
The data presented here demonstrate Recombinant ß-hCG is highly purified, glycosylated, and antibody reactive. It is an excellent replacement for native ß-hCG and has the added benefit of being produced in a sustainable, recombinant system. It is available in bulk supply with excellent lot-to-lot consistency.

Recombinant ß-hCG is now available as an economical and sustainable alternative to native ß-hCG for your research and assay development needs. Use the link at right to learn more.

SDS-PAGE
- Glycoprotein Stain -



Lanes
1 Markers
2 Blank
3 Positive Control
4 Blank
5 Negative Control
6 Blank
7 Reduced/Heated - 8 µg
8 Blank
9 Non-Reduced/Heated - 8 µg

Figure 3. SDS-PAGE of Recombinant ß-hCG, stained for glycoprotein.

HPLC

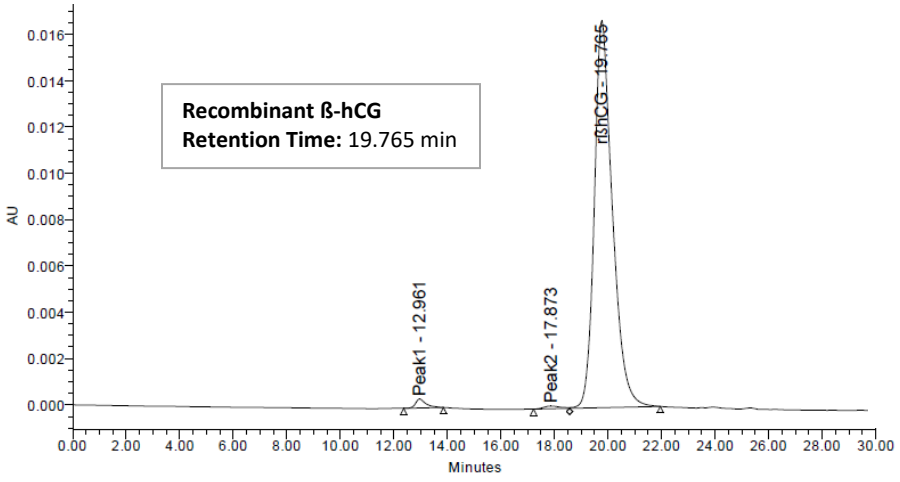


Figure 4. HPLC analysis of Recombinant ß-hCG. Analysis was performed using a Biozen 3 µm dSEC-2, 200 Å, 300 x 7.8 mm column.

Ordering Information

Product Description	Cat. No.	Part No.	
Recombinant Human Chorionic Gonadotropin, Beta Subunit (ß-hCG)	C0917	90638	*View C0917-90638*

Expressed Without Affinity Tags

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