



DBSQ/OCBQ ANALYTICAL METHOD REVIEW MEMO

To: The file STN 125813/0

From: Kouassi Ayikoe, Ph.D. CBER/OCBQ/DBSQ/LAC

Through: Kenneth S. Phillips, Ph.D., Lab Chief, CBER/OCBQ/DBSQ/LAC
Maryna Eichelberger, Ph.D., Division Director, CBER/OCBQ/DBSQ

Product: Obe-cel (Obecabtagene Autoleucel).

Applicant: Autolus Inc.

Subject: Review of analytical methods and validations used for Obecabtagene autoleucel (Obe-cel™) (b) (4) critical component of drug substance (Critical Component, CC) and drug product lot release.

Recommendation: Approval

Executive Summary:

On November 17, 2023, Autolus inc. submitted an original Biologics License Application (BLA STN 125813) for Obe-cel (Obecabtagene autoleucel) for Refractory B-cell Acute Lymphoblastic Leukemia (ALL). The following analytical methods used for lot release of Obe-cel were reviewed:

1. (b) (4)
2. (b) (4)
3. Clarity (b) (4), DP)
4. Appearance by visual inspection for color (b) (4) DP)
5. Visible Particles (b) (4), DP).

Conclusion: The analytical methods and their validations and/or qualifications reviewed for the Obe-cel CC (b) (4) and drug product (DP) were found to be adequate for their intended use.

Documents Reviewed


Information in sections of the original submission that describes control of the vector (b) (4), and DP in 3.2.S.4 and 3.2.P.5 respectively, including analytical procedures for CC and DP, and validation of these analytical procedures, was reviewed.

Background








On November 17, 2023, Autolus, Inc. submitted a new Biologics License Application (BLA), 125813 for Obe-cel, Obecabtagene autoleucel (AUTO1), an autologous cell therapy indicated for the treatment of adult patients (18 years or older) with relapsed or refractory (r/r) B cell precursor acute lymphoblastic leukemia. Obecabtagene autoleucel (obe-cel) employs CAR technology to genetically engineer autologous peripheral blood T cells with lentivector (b) (4). Obe-cel is administered as cell suspension (dispersion) for intravenous infusion after the process of lymphodepletion with fludarabine (FLU) and cyclophosphamide (CY). FLU is given on Days -6, -5, -4, and -3 (total dose 120 mg/m²) and CY on Days -6 and -5 (total dose 1000 mg/m²). The target dose of obe-cel is 410 x 10⁶ CD19 CAR-positive T cells (± 25%) as a two split doses, as follows: Day 1 - First obe-cel infusion; Day 10 (± 2 days) - Second obe-cel infusion.

Review Narrative

(b) (4)



(b) (4)




3. Clarity (b) (4) DP)

The specification for clarity for (b) (4) DP based on turbidity/degree of opalescence is (b) (4)

Method

(b) (4)



1 page determined to be not releasable: (b)(4)

(b) (4)

Conclusion.

The method is suitable for its intended use at (b) (4).

4. Appearance by Visual Inspection for color ((b) (4), DP).

Specification for the (b) (4) method for color is “colorless to light red” for (b) (4) and “report results” for DP; the test is performed per (b) (4)

Method:

(b) (4)

Method Verification.

(b) (4)

All the samples passed the acceptance criteria.

Conclusion.

The method is suitable for determining color of (b) (4) DP at (b) (4)


5. Visible Particles by Visual inspection ((b) (4) DP)

Visible Particles in (b) (4) DP are determined as a test for purity. The test is executed using analytical procedure (b) (4) in accordance with (b) (4)

(b) (4) The specification for Visible Particles is: Essentially free from visible particles.


Method.

(b) (4)



Method Verification:

(b) (4)



Conclusion

The method for visible particle determination in (b) (4) DP is suitable for its intended use.