

## **Certificate of Analysis**

Product name	Bulk of Ofatumumab	
Batch No.	TM-Ofat-02162018	
Expire Date	2020-02	
Storage condition	Sealed and stored at -70±15 °C for long term storage an	d 2-8 ℃
	for short term storage (< 1 months)	
Test items	Quality standard	Results
1. pH value	Corresponds to reference standard	Pass
2. Purity		
2.1 Reduced CE-SDS	Heavy chain and light chain NLT 95.0%	99.2%
2.2 Non-reduced CE-SDS	Main peak NLT 90.0%	92.1%
2.3 SEC-HPLC	Main peak NLS 95.0%	99.5%
3. Isoelectric Point	Corresponds to reference standard	Pass
4. Bacterial Endotoxins Test	$\leq 0.125 \; EU/mg$	Pass
5. Ultraviolet Spectra Scanning	278±3 nm	278nm
6. Residual Proteins of Host Cell	≤ 100 ppm	7
7. Exogenous Residual DNA	$\leq 100 \text{ pg/mg}$	2
8. Residual protein A	$\leq 100 \text{ ppm}$	1
9. Biological Activity	Compared with standard, the range of biological activity is	105%
	from 80% to 125%.	
10. Osmolality	Corresponds to reference standard	Pass
11. Peptide mapping	Corresponds to reference standard	Pass
12. N-terminal sequence	Corresponds to reference standard	Pass

Analyst:	Chrystal Zhu
Date:_	2018-03-13