

# Technical Data Sheet

## Oligo Mouse Anti-Human CD114

### Product Information

Material Number:	940393
Size:	25 Tests
Clone:	LMM741
Alternative Name:	GCSFR; G-CSF Receptor; G-CSF-R; G-CSFR; HG-CSFR; CSF3R
Reactivity:	Human (Tested in Development)
Isotype:	Mouse IgG1, $\kappa$
Immunogen:	G-CSFR cDNA transfected cells.
Application:	Single Cell 3' Sequencing (Qualified)
Barcode Sequence:	AAGTTAGCGTGTTCATTGATCGATTGTAGGTGGAGCG
SeqID:	AHS0272
Volume Per Test:	2 $\mu$ l
Workshop No.:	VI MA98
Entrez Gene ID:	1441
Storage Buffer:	Aqueous buffered solution containing BSA and $\leq 0.09\%$ sodium azide.
Regulatory Status:	RUO

### Description

The LMM741 monoclonal antibody specifically recognizes CD114 which is also known as the Granulocyte-Colony Stimulating Factor Receptor (G-CSFR). CD114 is a ~150 kDa type I transmembrane glycoprotein that is encoded by CSF3R (colony stimulating factor 3 receptor) and belongs to the class 1 cytokine receptor family. CD114 is expressed on granulocytes, monocytes, dendritic cells, endothelial cells, platelets, placenta and myeloid leukemias and a variety of tumor cell lines. CD114 serves as the receptor for granulocyte colony stimulating factor (G-CSF) which plays a role in myeloid cell proliferation and differentiation. The immunogen used to generate this hybridoma was cells transfected with an expression vector containing a full-length cDNA encoding the human G-CSFR.

#### Application Notes

The antibody was conjugated to an oligonucleotide that contains an antibody clone-specific barcode (ABC) flanked by a poly-A tail on the 3' end and a PCR handle (PCR primer binding site) on the 5' end. The ABC for this antibody was designed to be used with other BD AbSeq oligonucleotides conjugated to other antibodies. All AbSeq ABC sequences were selected in silico to be unique from human and mouse genomes, have low predicted secondary structure, and have high Hamming distance within the BD AbSeq portfolio, to allow for sequencing error correction and unique mapping. The poly-A tail of the oligonucleotide allows the ABC to be captured by the BD Rhapsody™ system. The 5' PCR handle allows for efficient sequencing library generation for Illumina sequencing platforms.

NOTE: The BD Rhapsody Single-Cell Analysis System must be used with the BD Rhapsody Express Instrument.

### Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze. The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography and conjugated to BD AbSeq oligonucleotide under optimal conditions.

### Recommended Assay Procedure

Put all BD AbSeq Reagents to be pooled into a Latch Rack for 500  $\mu$ L Tubes (Thermo Fisher Scientific Cat. No. 4900). Arrange the tubes so that they can be easily uncapped and re-capped with an 8-Channel Screw Cap Tube Capper (Thermo Fisher Scientific Cat. No. 4105MAT) and the reagents aliquoted with a multi-channel pipette. BD AbSeq tubes should be centrifuged for  $\geq 30$  seconds at 400  $\times$  g to ensure removal of any content in the cap/tube threads prior to the first opening.

### Suggested Companion Products

Catalog Number	Name	Size
554656	Stain Buffer (FBS)	500 mL

633701	Single-Cell Analysis System	1 Each
564219	Human BD Fc Block™	50 mg
564220	Human BD Fc Block™	0.25 mg

## Product Notices

1. This reagent has been pre-diluted for use at the recommended volume per test. Typical use is 2 µl for 1 × 10<sup>6</sup> cells in a 200-µl staining reaction.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. The production process underwent stringent testing and validation to assure that it generates a high-quality conjugate with consistent performance and specific binding activity. However, verification testing has not been performed on all conjugate lots.
5. Illumina is a trademark of Illumina, Inc.
6. This product is covered by one or more of the following patents: US 8,835,358; US 9,290,808; US 9,290,809; US 9,315,857; US 9,567,645; US 9,567,646; US 9,598,736; US 9,708,659; and US 9,816,137. This product, and only in the amount purchased by buyer, may be used solely for buyer's own internal research, in a manner consistent with the accompanying product literature. No other right to use, sell or otherwise transfer (a) this product, or (b) its components is hereby granted expressly, by implication or by estoppel. Diagnostic uses require a separate license.
7. Please refer to <http://regdocs.bd.com> to access safety data sheets (SDS).
8. Please refer to [bd.com/genomics-resources](http://bd.com/genomics-resources) for technical protocols.

## References

Kasper B, Welte K, Hadam MR. CD114 (granulocyte-colony stimulating factor receptor) Workshop Panel report. In: Kishimoto T, Tadamitsu Kishimoto .. et al., ed. Leucocyte typing VI : white cell differentiation antigens : proceedings of the sixth international workshop and conference held in Kobe, Japan, 10-14 November 1996. New York: Garland Pub.; 1997; :1072-1074.

Nicholson SE, Oates AC, Harpur AG, Ziemiecki A, Wilks AF, Layton JE. Tyrosine kinase JAK1 is associated with the granulocyte-colony-stimulating factor receptor and both become tyrosine-phosphorylated after receptor activation. Proc Natl Acad Sci U S A. 1994; 91(8):2985-2988.

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