The science you thought of, but couldn't do. Until now.

BD[®] AbSeq antibody-oligo conjugates

BD[™] AbSeq antibody-oligonucleotides conjugates leverage oligonucleotide sequencing to attain high-parameter protein detection for multi-omic analysis at the single-cell level. This new technology enables researchers to simultaneously detect protein^{*} and mRNA expression in the same experiment.

BD AbSeq antibody-oligo conjugates for single cell analysis include BD Rhapsody[™] system advantages:

- Simultaneously characterize surface proteins and mRNA expression at the single-cell level.
- Receive value assurance in a product backed by BD's reputation for high quality antibodies and cell analysis products.
- Get transformative results for diverse fields and applications.
- Obtain a digital data readout using molecular barcoding with unique molecular identifiers (UMIs).
- Examine cells at a level of detail never before seen.

Push the limits of discovery and measure both mRNA and protein expression^{*} for the same single cell.

Expand your current research capabilities by adding cell-surface protein expression profiling to single-cell mRNA-Seq experiments with next-generation sequencing (NGS) to generate multi-omics data. BD offers a full solution—from upstream labelling of your sample to library preparation, secondary analysis, and data visualization.

BD AbSeq antibody-oligo conjugates offer

INSIGHT	Interrogate high-parameter cell-surface protein markers in a single panel combined with RNA expression.
CONFIDENCE	Use the same quality BD clones that you have come to trust from BD Pharmigen [™] , a leader in antibody quality.
INTEGRITY	Benefit from a comprehensive solution, spanning antibody reagents and single cell capture to bioinformatics and data visualization.
CLARITY	Bring in protein expression data to provide better sample characteristics, such as more distinct cell cluster identification, enabling you to more deeply profile cells to further elucidate complex biological systems.
EFFICIENCY	Use one readout to analyze both protein and RNA, reducing experimentation time and increasing information derived from a single experiment.



* antibody-antigen interaction profiling

Cell types Cell types 30 40 30 20 20 10 10 0 Coord 2 Coord 2 0 -10 -10 -20 -20 -30 -30 -40 -40 . -40 -30 -20 -10 0 10 20 30 40 -40 -30 -20 -10 0 10 20 30 40 Coord 1 Coord 1 Naïve CD8 T B Naïve CD4 T Memory CD4 T Memory CD8 T NK Cells Monocytes DC

B. BD AbSeq combined with BD Rhapsody targeted mRNA-Seq

One readout answers two questions.

A. BD Rhapsody targeted mRNA-Seq alone

BD AbSeq enables high-parameter protein expression data simultaneously with single-cell RNA-Seq data to significantly improve your understanding of individual cells and cell populations.

BD AbSeq improves clustering of cell types by adding additional cell type-specific information to more clearly define cell-specific attributes. tSNE projection of 4816 human PBMC cells driven by A) mRNA expression from 399 genes and B) mRNA expression from 399 genes and protein expression from 30 cell surface markers.

Expand your understanding and accelerate your research with the BD AbSeq advantage.



Read more at: bd.com/genomics/abseq

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www.bd.com/genomics

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