TotalSeq™-D Human Heme Oncology Cocktail, V1.0

Catalog# / Size	399906 / 8 tests
Regulatory Status	RUO
Description	The TotalSeq™-D Human Heme Oncology Cocktail, V1.0 has been designed to react with 42 unique cell surface antigens, including principal lineage antigens, and includes 3 isotype control antibodies, to aid in the multiomic characterization of immune cells. The lyophilized cocktail provides convenience when processing several samples at the same time or at different time points, reducing inconsistencies associated with pipetting and handling multiplex vials and samples. The antibodies in the cocktail are provided at optimized concentrations to provide a ready-to-use solution once the cocktail has been reconstituted. The TotalSeq™-D Human Heme Oncology Cocktail, V1.0 comes packaged in convenient single-use vials.

Product Details

Verified Reactivity	Human
Formulation	Lyophilized from PBS containing stabilizers. Please reconstitute each tube with cell staining buffer as indicated in the application notes when ready to use. Make sure the cake is completely dissolved prior to using the cocktail for staining cells. The lyophilized cocktail material can vary in appearance and appear as either a lyophilized cake or a powder.
Preparation	This reagent is a combination of TotalSeq™-D oligo conjugated clones at optimal concentrations for single-cell sequencing analysis. See additional product notes for a list of clones.
Storage & Handling	The lyophilized antibody cocktail should be stored between 2°C and 8°C in powder form and in a sealed container with desiccant until ready to use. Once vial is opened, it is to be reconstituted immediately. After reconstitution cocktail should be used within 2 hours.
Application	PG - Quality tested
Recommended Usage	This panel has been optimized on human PBMCs for use with the Mission Bio Tapestri system. Using lysed whole blood or additional TotalSeq™ antibodies may require further optimization. Please contact our technical service group for further information. Buyer is solely responsible for determining whether Buyer has all intellectual property rights that are necessary for Buyer's intended uses of the BioLegend TotalSeq™ products. For example, for any technology platform Buyer uses with TotalSeq™, it is Buyer's sole responsibility to determine whether it has all necessary third party intellectual property rights to use that platform and TotalSeq™ with that platform.
Application Notes	1. Equilibrate lyophilized panel to room temperature for 5 min. 2. Spin down at 10,000 x g for 30 seconds at room temperature. 3. Resuspend the lyophilized cocktail in 60 µL of Cell Staining Buffer (Cat. No. 420201). Replace the cap and vortex for 10 seconds.Note: Excess volume added to aid in removal of potential protein aggregates. 4. Incubate at room temperature for 5 minutes. 5. Vortex again and spin down at 10,000 x g for 30 seconds at room temperature. 6. Transfer the entire volume (60 µL) of reconstituted panel to a low protein binding Eppendorf tube (Fisher cat. no. 022431081) or similar tube. 7. Centrifuge at 14,000 x g for 15 min at 4°C. 8. Proceed with staining the cells following Mission Bio User Guide, Stain Cells section. Note: Staining cells with this cocktail should occur after cells have been stained with Human TruStain FcX™ (Fc Receptor Blocking Solution).
Additional Product Notes	TotalSeq™-D reagents are designed to profile protein expression at a single cell level. The Mission Bio Tapestri platform and DNA sequencer (e.g. Illumina sequencers) are required. Please contact technical support for more information, or visit https://www.biolegend.com/en-us/totalseq/single-cell-dna The barcode flanking sequences are CGAGATGACTACGCTACTCATGG (PCR handle), and

GAGCCGATCTAGTATCTCAGT*C*G (capture sequence). * indicates a phosphorothioated bond, to prevent nuclease degradation.

The full oligomer sequence for this product, with the specific barcode in brackets is CGAGATGACTACGCTACTCATGG [Barcode] GAGCCGATCTAGTATCTCAGT*C*G.

TotalSeq-D0090 mouse IgG1, κ isotype ctrl has been observed to have elevated non-specific binding on monocytes in some donors. Isotype controls are included in the Heme Oncology Panel for the purpose of identifying low quality cells which have been observed to have staining for multiple isotype controls. It is not recommended to use isotype controls for thresholding of antibodies of the same isotype.

Download the excel file for a full list of clones and barcodes.

Product Citations

1. Bianchi A, *et al.* 2022. Genome Biol. 23:229. PubMed

RRID

AB_2890849 (BioLegend Cat. No. 399906)

Antigen Details

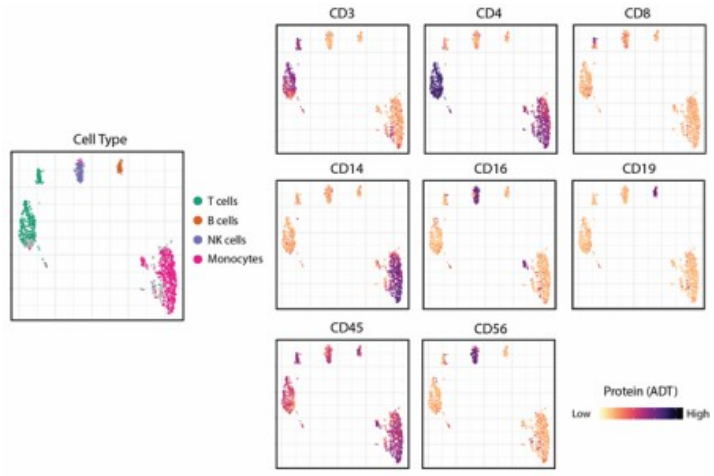
Distribution

Multiple cell types and cell states

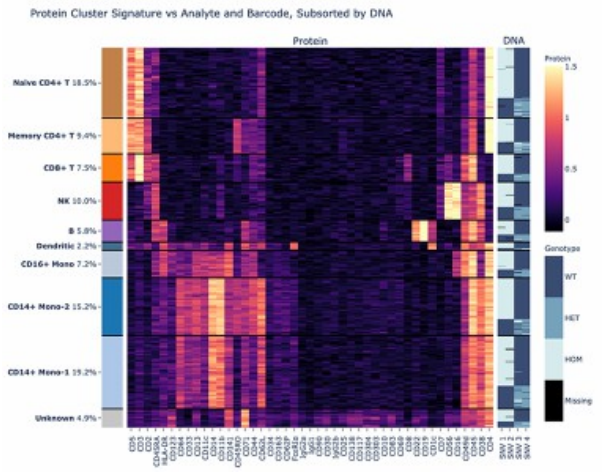
Gene ID

NA

Product Data



Human PBMCs were stained with the TotalSeq™-D Heme Oncology Cocktail v1.0 and processed using the Mission Bio Tapestri DNA and Protein workflow. Protein count data were transformed and visualized in a UMAP projection overlaid with protein. Clusters were identified based on protein expression only.



PBMCs from two donor samples were mixed together, stained with TotalSeq™-D antibodies and run on Mission Bio's Tapestri platform. Heatmap visualization reveals the power to obtain genotype and phenotype from the same cells across thousands of cells.

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