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Datasheet for MB-014

0.5 M EDTA pH 8.0

Overview

Description:	0.5 M EDTA pH 8.0 - MB-014
Item No.:	MB-014
Size:	100 mL
Applications:	FC

Product Details

Background:	EDTA is widely used for scavenging metal ion in biochemistry and molecular biology. Ion depletion is commonly used to deactivate metal-dependent enzymes, either as an assay for their reactivity or to suppress damage to DNA or proteins. In tissue culture EDTA is used as a chelating agent that binds to calcium and prevents joining of cadherins between cells, preventing clumping of cells grown in liquid suspension, or detaching adherent cells for passaging. EDTA is also known to inhibit a range of metallopeptidases, the method of inhibition occurs via the chelation of the metal ion required for catalytic activity.
Synonyms:	Ethylenediaminetetraacetic acid, EDTA

Target Details

Relevant Links:	• MB-014 SDS

Application Details

Suggested Applications:	FC (Based on references)
Application Note:	Ethylenediaminetetraacetic acid is a concentrated stock solution and should be diluted appropriately with distilled, deionized water or equivalent to its final working concentration. This buffer consists of 0.5 M Trisodium EDTA at pH 8.0. Meticulously prepared using ultra pure reagents dissolved in highly polished pharmaceutical grade deionized water (DI) treated with diethyl pyrocarbonate (DEPC).
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.

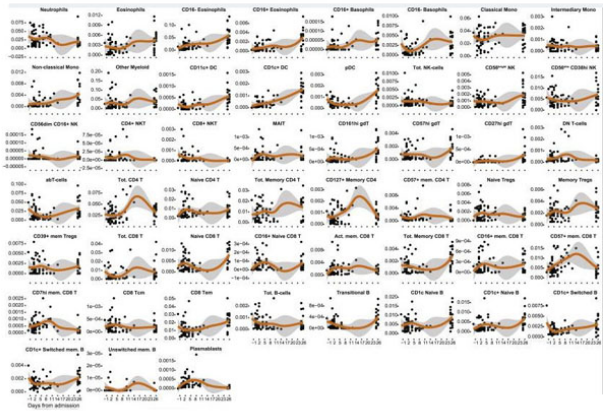
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	0.5 M
Buffer:	See application note.
Preservative:	None
Stabilizer:	None

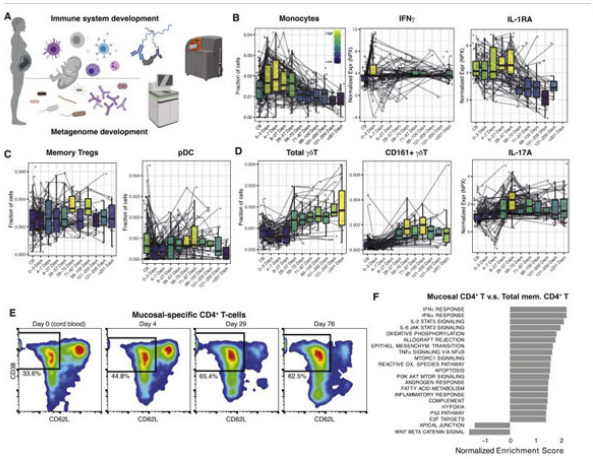
Shipping & Handling

Shipping Condition:	Ambient
Storage Condition:	Store container at room temperature (18° to 26° C) prior to opening. If desired, the solution may be stored at 4° C or less. Some salts may precipitate out of solution at lower temperature. Allow buffer to equilibrate to room temperature (18° to 26° C) to restore solubility of some salts.
Expiration:	Expiration date is six (6) months from date of receipt.

Images



Flow Cytometry
Immune Cell Proportions in COVID-19.
Proportion of 57 white blood cell populations determined by mass cytometry from acute to recovery phase of COVID-19 patients (n = 35 individuals). Loess smoothing in orange.
Figure 3. PMID: 32838342.



Flow Cytometry
Systems-level analysis of immune development in human newborns.
(A) Study overview.
(B) Monocyte abundance analyzed by mass cytometry and IFNγ and IL1RA measured by Olink assays in longitudinal blood samples (n = 858) from 208 individual children and binned by sampling day of life. Boxplots are colored by mean rank. CB, cord blood.
(C) Blood mass cytometry analyses of memory Tregs. pDC, plasmacytoid DC.
(D) Blood γδT cell abundance and subset of γδT cells expressing CD161 and plasma IL-17A.
(E) Representative fluorescence-activated cell sorting (FACS) plots of CD38+CD62L−CD4+ T cells sorted at postnatal days 0, 4, 29, and 76 from newborn peripheral blood mononuclear cells (PBMCs) and subjected to bulk mRNA sequencing (mRNA-seq).
(F) Gene set enrichment analysis showing the top enriched hallmark pathways in mucosal-specific versus total memory CD4+ T cells. Figure 1. PMID: 34143954.



Bottle
0.5 M EDTA pH 8.0

References

- Tan Z et al. Immune development differs between preterm newborns fed mothers' own milk and donor milk. *iScience.* (2025)
- Henrick BM et al. Bifidobacteria-mediated immune system imprinting early in life. *Cell.* (2021)
- Rodriguez L et al. Systems-Level Immunomonitoring from Acute to Recovery Phase of Severe COVID-19 *Cell Rep Med.* (2020)
- Lakshmikanth T et al. Human immune system variation during 1 year. *Cell Rep.* (2020)
- Olin A et al. Stereotypic immune system development in newborn children. *Cell.* (2018)

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