



Certificate of Analysis & Product Specifications

Human Identification, Forensic Casework, Sample Collection
Trace DNA Extraction, STR Analysis
DNA Biometrics, Q-PCR

Single Cell RNA Sequencing: Multi-Seq LMO

Lignoceric and Palmitic Conjugated Lipid Modified Oligos

For Research Use Only. Not for use in diagnostic procedures for clinical purposes

Lipid Modified Oligos (LMO)

LMO Lig-Anchor


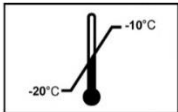




LMO Palm-Co Anchor

Single Cell RNA Sequencing: Multi-Seq LMO

Lignoceric and Palmitic Conjugated Lipid Modified Oligos

Product Label Information

	Content	Catalog No.	Description	Size
REF	<input type="checkbox"/>	26-2202-02	LMO Lig-Anchor (Lignoceric acid conjugated oligo)	2 nmols
	<input type="checkbox"/>	26-2204-02	LMO Palm-Co Anchor (Palmitic acid conjugated oligo)	2 nmols

		
Research Use Only	Storage Store at -20°C to -10°C	Lot Number Stated on product tube and packing slip
		
Expiry 6 months after reconstitution	Instructions Consult product description	QR Code Visit Gene Link website for product details

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The LMO are synthetic oligonucleotides manufactured by Gene Link, purified and processed using molecular biology grade water and certified to be DNase and RNase Free. The LMO are of more than 98% purity as determined by 7M urea denaturing polyacrylamide gel electrophoresis.

Appropriate nuclease free handling, dispensing and storage conditions required.

Manufacturing lot numbers are stated on the label of each product and accompanying packing slip.

Storage: Shipped lyophilized. Store at -20°C after reconstitution.

Caution: Use RNase free tubes and reagents for further dilution and use.

Product Description

MULTI-Seq LMO Lig Anchor and MULTI-Seq LMO Palm Co-Anchor oligos are lignoceric and palmitic acid conjugated oligos as described by McGinnis, C. et al. (1) The synthetic oligos are purified by polyacrylamide gel electrophoresis followed by conjugation to lignoceric acid NHS at the 5' end of LMO Lig-Anchor and palmitic acid at the 3' end of LMO Palm-Co Anchor. The sequences of these LMO are given below.

Catalog No.	Description
26-2202-02	LMO Lig-Anchor (Lignoceric acid conjugated oligo)
Sequence:	5'-[Lig-C24-N][AmC6]GTAACGATCCAGCTGTCACTTGGAAATCTCGGGTGCCAAGG-3'
26-2204-02	LMO Palm-Co Anchor (Palmitic acid conjugated oligo)
Sequence:	5'-AGTGACAGCTGGATCGTTAC[AmC7][Pal-C16-N]-3'

Lipid modified oligos (LMO; lignoceric, palmitic, cholesterol etc.); These LMO rapidly and stably incorporate into the plasma membrane of live cells by step-wise assembly. McGinnis, C. et al. (1) adapted LMOs into MULTI-seq: scRNA-seq (single-cell) and snRNA-seq (single-nucleus) sample multiplexing using lipid-tagged indices. MULTI-seq localizes sample barcodes to live cells and nuclei regardless of species or genetic background while preserving cell viability and endogenous gene expression patterns.

Refer to the paper by McGinnis, C. et al. (1) for use of these LMO oligos and references (2-5) for detailed information on single-cell and single-nucleus RNA sequencing (scRNA-seq and snRNA-seq)

Gene Link also offers custom conjugation of Lignoceric and Palmitic acid to other sequences. Contact Gene Link at support@genelink.com for custom modified oligos.

References

1. McGinnis, C. et al. MULTI-seq: sample multiplexing for single-cell RNA sequencing using lipid-tagged indices. *Nat. Methods* **16**, 619-626 (2019).
2. Ramsköld, D. et al. Full-length mRNA-Seq from single cell levels of RNA and individual circulating tumor cells. *Nat. Biotechnol.* **30**, 777-782 (2012).
3. Hashimshony, T., Wagner, F., Sher, N. & Yanai, I. CEL-Seq: single-cell RNA-Seq by multiplexed linear amplification. *Cell Rep.* **2**, 666-673 (2012).
4. Gierahn, T. M. et al. Seq-Well: portable, low-cost RNA sequencing of single cells at high throughput. *Nat. Methods* **14**, 395-398 (2017).
5. Cao, J. et al. Comprehensive single-cell transcriptional profiling of a multicellular organism. *Science* **357**, 661-667 (2017).

Ordering Information

Product	Catalog No.	Size
LMO Lig-Anchor (Lignoceric acid conjugated oligo)	26-2202-02	2 nmols
LMO Palm-Co Anchor (Palmitic acid conjugated oligo)	26-2204-02	2 nmols

Related Products Ordering Information

Product	Catalog No.	Size
TCEP 0.5M solution; 100 µL	40-5116-01	100 µL
TCEP 0.5M solution ; 1mL	40-5116-10	1 mL
RNase A solution, DNase Free. 2 mg/ml;; 1 mL	40-5101-10	2 mg
RNase A solution, DNase Free. 10 mg/ml; 1 mL	40-5101-01	10 mg
DNase I, RNase-free; 2u/µl	40-5111-05	500 units
Proteinase K; 10 mg/ml	40-5203-02	200 µL
Lytic Enzyme; 4000 units/ml	40-5205-02	200 µL
Glycogen Solution; 10 mg/ml	40-5112-02	200 µL

Omni-Pure™ RNA Purification Systems

Product	Catalog No.	Size*
Omni-Pure™ Blood & Bodily fluids RNA Spin Column Purification System	40-4080-05	50
Omni-Pure™ Blood & Bodily fluids RNA Spin Column Purification System	40-4080-10	100
Omni-Pure™ Blood & Bodily fluids RNA Spin Column Purification System	40-4080-50	500
Omni-Pure™ Universal RNA Spin Column Purification System	40-4090-05	50
Omni-Pure™ Universal RNA Spin Column Purification System	40-4090-10	100
Omni-Pure™ Universal RNA Spin Column Purification System	40-4090-50	500
Omni-Pure™ Blood & Bodily fluids RNA Purification System	40-4081-05	50
Omni-Pure™ Blood & Bodily fluids RNA Purification System	40-4081-10	100
Omni-Pure™ Blood & Bodily fluids RNA Purification System	40-4081-50	500
Omni-Pure™ Universal RNA Purification System	40-4091-05	50
Omni-Pure™ Universal RNA Purification System	40-4091-10	100
Omni-Pure™ Universal RNA Purification System	40-4091-50	500
Omni-Pure™ Viral RNA Spin Column Purification System	40-3650-01	100
Omni-Pure™ Viral RNA Spin Column Purification System	40-3650-05	500

**Unit of size is purification performed. Sample volume for each purification system varies. Each purification yields sufficient quantity for desired applications.

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