

## MAGPIX and FLEXMAP 3D Luminex Platforms for Direct Detection of miR-122-5p through Dynamic Chemical Labeling

Antonio Marín-Romero <sup>a</sup>, Valerie Regele <sup>b</sup>, Dajana Kolanovic <sup>b</sup>, Manuela Hofner <sup>b</sup>, Juan José Díaz-Mochón <sup>c</sup>, Christa Nöhhammer <sup>b</sup> and Salvatore Pernagallo <sup>a\*</sup>

<sup>a</sup>. DESTINA Genomica S.L. Parque Tecnológico Ciencias de la Salud (PTS), Avenida de la Innovación 1, Edificio BIC, Armilla, Granada 18100, Spain.

<sup>b</sup>. Austrian Institute of Technology GmbH, Center for Health and Bioresources, Competence Unit Molecular Diagnostics, Vienna, Austria.

\* Corresponding author: [salvatore@destinagenomics.com](mailto:salvatore@destinagenomics.com)

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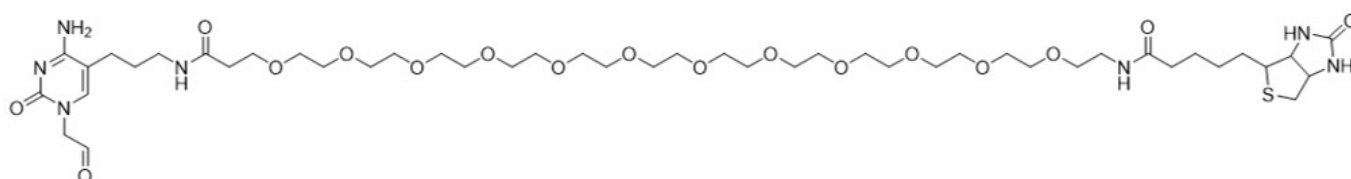
### Electronic Supplementary Information (ESI)

**Table S1: Sequences.**

Sequence ID	Name	Peptide with abasic position (N'-C')
<b>1</b>	DGL 122	xx-CACCATT*GT*_AC*ACT*CCA
		miRNA sequence (5'-3')
<b>4</b>	Target miR-122-5p	<u>UGGAGUGUGACAAUGGUGUUUG</u>

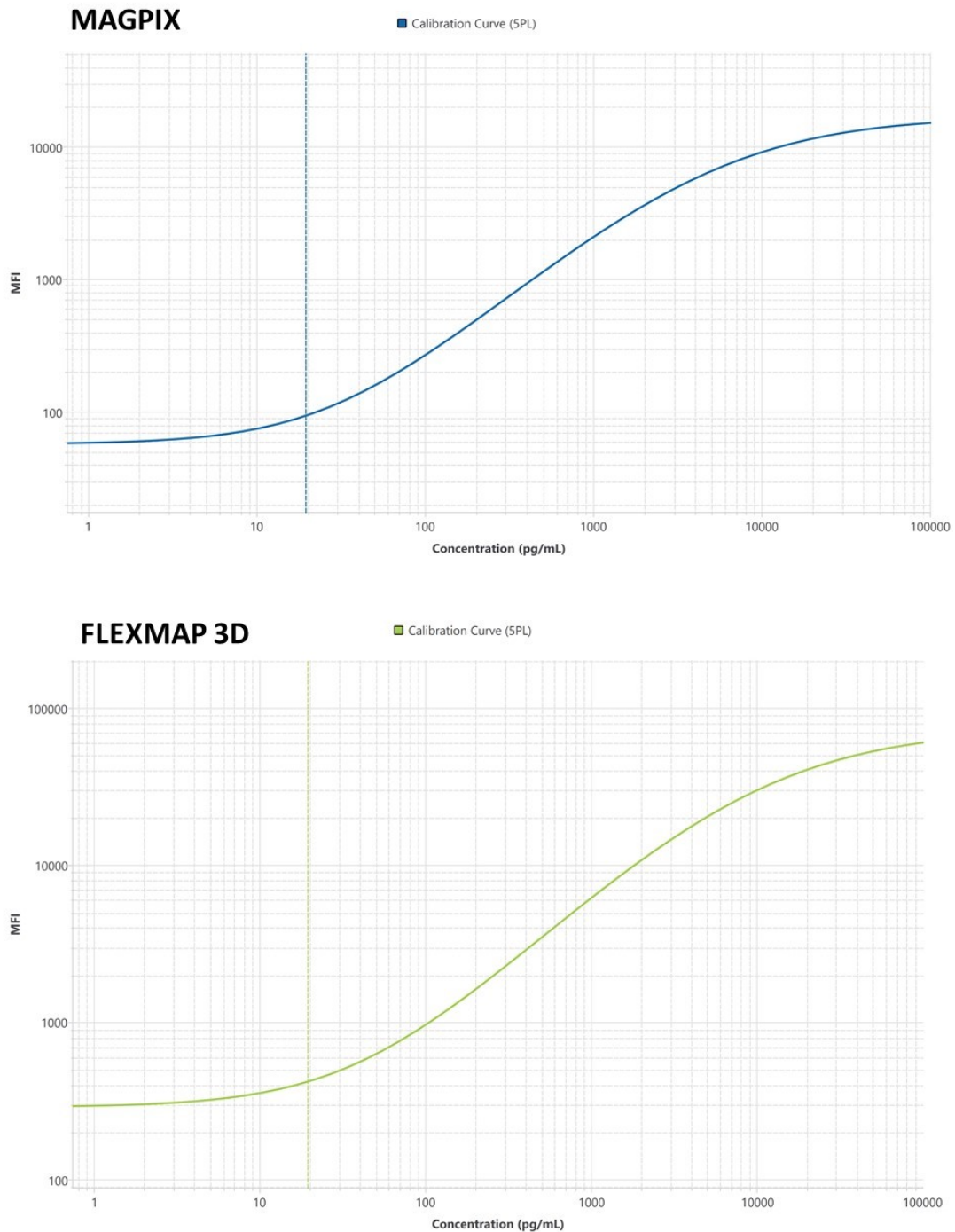
xx = amino-PEG-linker; "\*" = propanoic acid side chain at the gamma position; "\_" = abasic unit containing a propanoic acid side chain at the gamma position. The underlined sequence miR-122-5p is the region that hybridise with the DGL 122. The "G" in positions in bold are opposite to the abasic unit monomers and allows the specific incorporation of the aldehyde-modified biotinylated cytosine (Figure S1).

**Figure S1: Aldehyde-modified biotinylated cytosine.**



Chemical structure of aldehyde-modified biotinylated cytosine.

Figure S2: Calibration curves.



Calibration curves were constructed by utilizing a 5PL non-linear regression model, where MFI Average values were plotted against the concentration of synthetic miR-122-5p. The curve generated using the MAGPIX platform for Experiment 1 is depicted above, while the curve generated using the FLEXMAP 3D platform for Experiment 1 is displayed below. To signify the LLOQ, a vertical line is indicated on each curve. Each measurement was conducted in triplicate.