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(54) Title (EN): METHOD FOR DETERMINATION OF CELLULAR MRNA

(54) Title (FR): PROCÉDÉ DE DÉTERMINATION D'ARNM CELLULAIRE

(57) Abstract:
(EN): Methods and systems for mRNA analysis and quantification of mRNA expression in cells are provided. An example method includes introducing a first capture probe and a second capture probe into the cells, the first capture probe and the second capture probe each configured to be complementary to a respective section of target mRNA within the cells, wherein binding of the first and second capture probes to the respective sections of the target mRNA results in tagging of the cells and causes the first and second capture probes to form clusters with each other. The first capture probe and the second capture probe are each bound to magnetic nanoparticles (MNPs) that, when trapped within the tagged cells, cause the tagged cells to be susceptible to magnetic forces. The method and system further include introducing the cells into a device configured to magnetically capture tagged cells.

(FR): La présente invention concerne des procédés et des systèmes d'analyse d'ARNm et de quantification de l'expression de l'ARNm dans des cellules. Un procédé donné à titre d'exemple comprend l'introduction d'une première sonde de capture et d'une seconde sonde de capture dans les cellules, la première sonde de capture et la seconde sonde de capture étant chacune configurées pour être complémentaires d'une section respective d'un ARNm cible dans les cellules, la liaison de la première et de la seconde sonde de capture aux sections respectives de l'ARNm cible entraînant le marquage des cellules et amenant la première et la seconde sonde de capture à former des amas l'une avec l'autre. La première sonde de capture et la seconde sonde de capture sont chacune liées à des nanoparticules magnétiques (MNP) qui, lorsqu'elles sont piégées à l'intérieur des cellules marquées, amènent les cellules marquées à être sensibles aux forces magnétiques. Le procédé et le système comprennent en outre l'introduction des cellules dans un dispositif configuré pour capturer magnétiquement les cellules marquées.

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