

Supporting Information

## **Magnetic-capture-based SERS detection of multiple serum microRNA biomarkers for cancer diagnosis**

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Table S1. Sequences of oligonucleotides used in this work

oligonucleotides	Name	Sequence
miR-141	Target sequence	5'-UAA CAC UGU CUG GUA AAG AUG G-3'
	Reporter probe (5'-thiol modified reporter probe)	HS-(CH <sub>2</sub> ) <sub>6</sub> -5'-C CAT CTT TAC-3'
	Capture probe (3'-thiol modified capture probe)	5'-AGA CAG TGT TA TTTTTTTTTT-3'-SH
miR-429	Target sequence	5'-UAA UAC UGU CUG GUA AAA CCG U-3'
	Reporter probe (5'-thiol modified reporter probe)	HS-(CH <sub>2</sub> ) <sub>6</sub> -5'-A CGG TTT TAC-3'
	Capture probe (3'-thiol modified capture probe)	5'-AGA CAG TAT TA TTTTTTTTTT-3'-SH
miR-200b	Target sequence	5'-UAA UAC UGC CUG GUA AUG AUG A-3'
	Reporter probe (5'-thiol modified reporter probe)	HS-(CH <sub>2</sub> ) <sub>6</sub> -5'-T CAT CAT TAC-3'
	Capture probe (3'-thiol modified capture probe)	5'-AGG CAG TAT TA TTTTTTTTTT-3'-SH

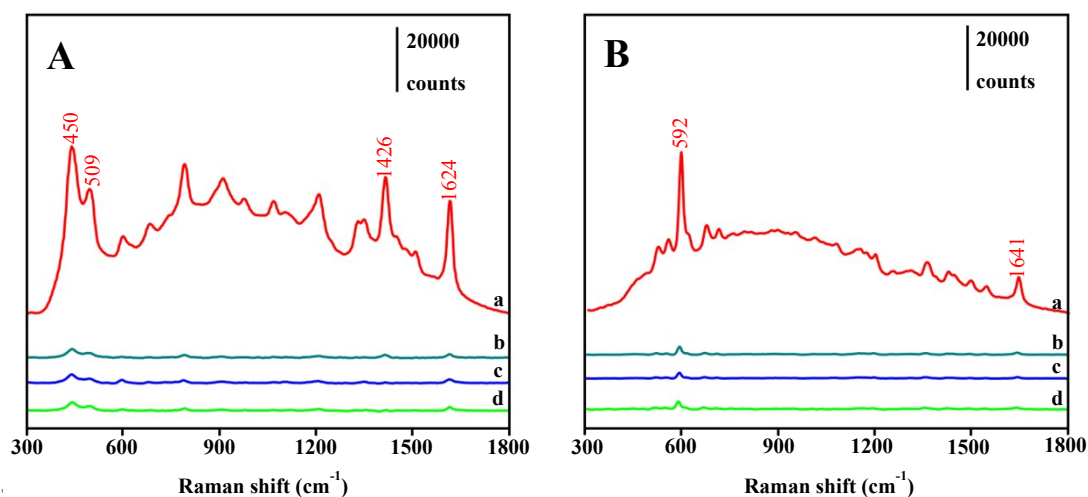


Figure S1. (A) SERS spectra for magnetic pull-down hybridization reactions (a) containing 429-SA@GNPs, 429-Au@MNPs, and target miR-429 (200 pM), (b) containing 429-SA@GNPs, 429-Au@MNPs, and nonspecific target miR-141, (c) containing 429-SA@GNPs, 429-Au@MNPs, and nonspecific target miR-200b, (d) containing only 429-SA@GNPs and 429-Au@MNPs. (B) SERS spectra for magnetic pull-down hybridization reactions (a) containing 200b-SA@GNPs, 200b-Au@MNPs, and target miR-200b (450 pM), (b) containing 200b-SA@GNPs, 200b-Au@MNPs, and nonspecific target miR-141, (c) containing 200b-SA@GNPs, 200b-Au@MNPs and nonspecific target miR-429, (d) containing only 200b-SA@GNPs and 200b-Au@MNPs. SERS spectra are measured at an integration time of 5 s.