

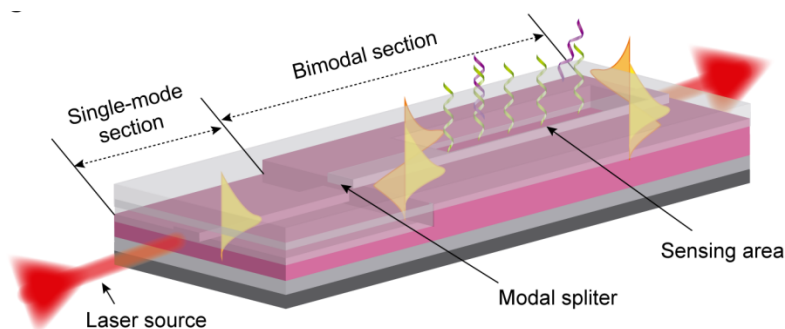
Supplementary Material for

**Analysis of alternative splicing events for cancer diagnosis  
using a multiplexing nanophotonic biosensor**

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**Fig. S1.** Scheme of the working principle of a Bimodal Waveguide interferometer. Light is injected in the single-mode input waveguide and after a modal splitter two modes are excited and propagate until the device output.

**Reagents and buffer solutions.** Solvents used for sensor chips' cleaning were purchased to Panreac Applichem (Spain): Acetone 99.5%, Ethanol 99% and Methanol 99%. Main salts and chemical reagents for sensor cleaning, buffer preparation and biofunctionalization were acquired from Sigma-Aldrich (Germany): Sodium Dodecyl Sulfate (SDS), Hydrochloric Acid (HCl), anhydrous Toluene 99.8%, Sodium Phosphate monobasic ( $\text{NaH}_2\text{PO}_4$ ) 99%, Sodium Phosphate dibasic ( $\text{Na}_2\text{HPO}_4$ )  $\geq 99\%$ , Sodium Chloride ( $\text{NaCl}$ )  $\geq 99.5\%$ , Sodium Citrate dihydrate (SSC)  $\geq 99\%$ , Sodium carbonate ( $\text{Na}_2\text{CO}_3$ )  $\geq 99\%$ , N,N-dimethylformamide anhydrous  $\geq 99.8\%$ , (DMF), triethylamine  $\geq 99\%$  ( $\text{NEt}_3$ ), Pyridine anhydrous 99.8%, crosslinking molecule p-Phenylene diisothiocyanate 98% (PDITC), 3-Aminopropyltriethoxy silane  $\geq 98\%$ , (APTES), N,N-Diisopropylethylamine (DIPEA), Mercapto-1-hexanol (MCH) 97%, and Formamide  $\geq 99.5\%$  (FA).

Several buffers and solvents have been prepared either for functionalization or target analysis: 20xSSC (3 M NaCl, 0.3 M sodium citrate –pH 7-),  $\text{Na}_2\text{CO}_3$  buffer ( $\text{NaHCO}_3$  0.1 M,  $\text{Na}_2\text{CO}_3$  0.1 M, EDTA 1mM, pH 9.2), Buffer solutions were prepared by using milliQ  $\text{H}_2\text{O}$  incubated O/N with 2% DEPC and autoclaved at 121°C during 1 hour. All solid materials were autoclaved at 121°C/20 min for plastic and 134°C/10 min for glass. Biosensor microfluidics were cleaned by sequentially flowing SDS 0.5 M, HCl 0.1 M, Ethanol 95%, NaOH 0.1 M and milliQ  $\text{H}_2\text{O}$ -DEPC water.