

IFN- γ -induced signal-on fluorescence aptasensors: from hybridization chain reaction amplification to 3D optical fiber sensing interface towards a deployable device for cytokine sensing

Fuyuan Zhang,^{a, b, c} Fei Deng,^b Guo-Jun Liu,^{d, e} Ryan Middleton,^d David W. Inglis,^a Ayad Anwer,^b Shuo Wang,^c Guozhen Liu^{a, b*}

^a ARC Centre of Excellence in Nanoscale Biophotonics (CNBP), Macquarie University, North Ryde 2109, Australia.

^b Graduate School of Biomedical Engineering, Faculty of Engineering, The University of New South Wales, Sydney 2052, Australia. E-mail: guozhen.liu@unsw.edu.au.

^c Key Laboratory of Food Nutrition and Safety, Ministry of Education of China, Tianjin University of Science and Technology, Tianjin 300457, China.

^d Australian Nuclear Science and Technology Organisation, New Illawarra Road, Lucas Heights, NSW 2234, Australia.

^e Discipline of Medical Imaging & Radiation Sciences, Faculty of Medicine and Health, Brain and Mind Centre, University of Sydney, 94 Mallett Street, Camperdown, NSW 2050, Australia.

*Correspondence author: guozhen.liu@unsw.edu.au

Table S1. DNA strands used in this experiments

DNA strands used in this experiments	
For strand displacement	5-GGGGTTGGTTGTGTTGGGTGTTGTGT-FAM-3
	5-BHQ1-ACACAACACTCAAT-3
	5-GGGGTTGGTTGTGTTGGGTGTTGTGT-FAM-3
	5-BHQ-ACACAACTTTTTGACACAAC-3
	5-FAM-GGGGTTGGTTGTGTTGGGTGTTGTGT-3
	5-CACAACCAACCCC-BHQ1-3
	5-Texas red-GGGGTTGGTTGTGTTGGGTGTTGTGT-3
	5-CACAACCAACCCC-BHQ2-3
For fiber	5-Texas red-GGGGTTGGTTGTGTTGGGTGTTGTGT-biotin-3
	5-CACAACCAACCCC-BHQ2-3
MB	5- CCCTGGGCTCAACCTAGGAATCGCGTTGGTTGTGTTGGGTGTTGTGT GCGATTCCT-3
Target sequence	5-CCCTGGGCTCAACCTAGGAATCGC-3
H1	5-GCGATTCCTAGGTTGAGCCCAGGGTTT-FAM- CACAGTCCCTGGGCTCAACCTAGG-3
H2	5- CCCTGGGCTCAACCTAGGAATCGCTTTCCTAGGTTGAGCCCAGGGAC TGTG-TAMRA-3