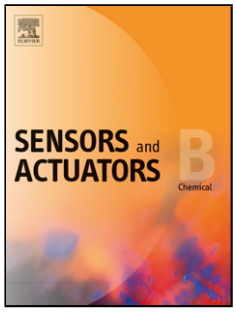

Title: A Novel Dual Energy Transfer Probe for Intracellular mRNA Detection with High Robustness and Specificity

Authors: Bin Wang, Zhuyuan Chen, Dahai Ren, Zheng You

PII: S0925-4005(18)31770-2
DOI: https://doi.org/10.1016/j.snb.2018.10.007
Reference: SNB 25440

To appear in: *Sensors and Actuators B*

Received date: 12-6-2018
Revised date: 3-9-2018
Accepted date: 4-10-2018

Please cite this article as: Wang B, Chen Z, Ren D, You Z, A Novel Dual Energy Transfer Probe for Intracellular mRNA Detection with High Robustness and Specificity, *Sensors and amp; Actuators: B. Chemical* (2018), https://doi.org/10.1016/j.snb.2018.10.007

A Novel Dual Energy Transfer Probe for Intracellular mRNA Detection with High Robustness and Specificity

Bin Wang[a], Zhuyuan Chen[b], Dahai Ren[a,*], Zheng You[a]

[a] State Key Laboratory of Precision Measurement Technology and Instruments, Department of Precision Instrument, Tsinghua University, Beijing, 100084, China

[b] Department of Basic Sciences, Tsinghua University School of Medicine, Beijing, 100084, China

*To whom correspondence should be addressed. Tel: +86-010-62776000;

E-mail: rendh@tsinghua.edu.cn (D. Ren).

Research Highlights

- Title: A Novel Dual Energy Transfer Probe for Intracellular mRNA Detection with High Robustness and Specificity
- Bin Wang, Zhuyuan Chen, Dahai Ren*, Zheng You
- Highlights:
- The proposed dual energy transfer probe for intracellular mRNA detection eliminates nuclease degradation-induced false positive results.
- Detection of mRNA without amplification at sub-nM level was achieved.
- The impact of anti-tumor drugs on the expression of tumor-specific survivin gene in living cells was first studied.
- The probe shows higher stability than conventional molecular beacons inside living cells.