

Product Data Sheet

Cat#: AD-112-U
Cat#: AD-112-B, Biotin labeled
Cat#: AD-112-F, FITC labeled

Product Description: Crude Extracellular Mixture of E. coli

Aptamer Type: DNA

Sequence: 5'-
CACGGATCCTGACAAGGATGTGTGCGTTGTCGAGACCTGCGACCGGAACACTACACTGTGTGGGATGGATTTCTTTACA
GTTGTGTGCAGCTCCGTCGACTCTTCCTAGC-{Internal/Fluorescein-T}A-{Internal/dabcyl-T}-GGTTCGATCAAGA-3'; 125-
mer

Size 100 nM

Mol. Wt: 38623.03 g/mole

Purity: >95%

Affinity: n/a

Comments: In the presence of E. coli CEM, aptamer adopts an active conformation and cleaves the adenosine ribonucleotide residue, separating fluorescein from the dabcyl quencher. nnn in structure represents (fluorescein-dT)-adenosine ribonucleotide - (dabcyl-dT).

Notes: To overcome the reduced detection times by PCR and antibodies based methods for pathogen detection, catalytic DNA molecules (DNAzymes) were developed. Fluorogenic DNAzymes based on RFD DNAzyme system was isolated from a DNA library to fluoresce in the crude extracellular mixture (CEM) that is produced by a specific bacterial pathogen E.coli.

References: Ali et al. "Fluorogenic DNAzyme Probes as Bacterial Indicators." *Angewandte Chemie International Edition*, 50 (2011): 3751-3754.

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