

Product Specification Sheet

DNA Aptamer Library

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| <input type="checkbox"/> Cat. #DAL-N-20 | DNA Aptamer library, 20 bp random library with flanking sequence | Size: 100 ug |
| <input type="checkbox"/> Cat. #DAL-N-30 | DNA Aptamer library, 30 bp random library with flanking sequence | Size: 100 ug |
| <input type="checkbox"/> Cat. #DAL-N-40 | DNA Aptamer library, 40 bp random library with flanking sequence | Size: 100 ug |

Aptamers are short strand of oligonucleic acid (DNA or RNA of 15-60 bases) or oligo-peptide (15-60 amino acids) that binds to a specific target molecule. Aptamers are usually selected from a random, synthetic library of DNA/RNA with a complexity of 10^{14} - 10^{16} molecules of approximately 30-60 bases or amino acids.

A DNA fragment containing (20, 30, 40) random nucleotide sequence followed by flanking regions, containing desired restriction sites on either side is generated by DNA synthesis. The complete sequence is then cloned in an appropriate host, thus generating a library.

Small scale libraries can also be amplified by PCR.

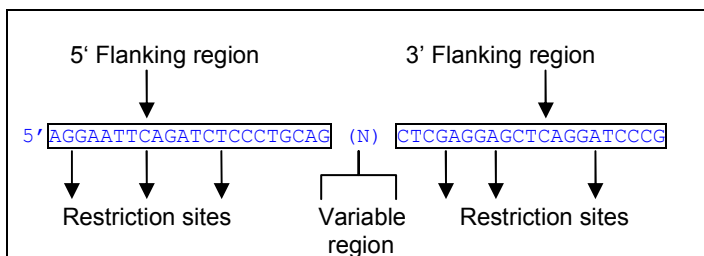


Fig 1 : Aptamer library

Some restriction sites present in the multiple cloning sites of common vectors are:

Enzyme	Restriction site
Bam HI	G/GATCC
Bgl II	A/GATCT
EcoRI	G/AATTC
HinD III	A/AGCTT
Kpn I	GGTAC/C
Not I	GC/GGCCGC
Pst I	CTGCA/G
Sac I	GAGCT/C
Spe I	A/CTAGT
Xho I	C/TCGAG

Flanking sequences:

Direction	Sequence with restriction sites
5'	22-mer 5' AG GAATTC AGATCT CC CTGCAG EcoRI BglII PstI
3'	21-mer. 5' CTCGAG GAGCTC A GGATCC CG XhoI SacI BamHI

DNA Aptamer libraries:

Cat #	Sequence
DAL-N-20	5' AGGAATTCAGATCTCCCTGCAG (N) ₂₀ CTCGAGGAGCTCAGGATCCCG (63 mer)
DAL-N-30	5' AGGAATTCAGATCTCCCTGCAG (N) ₃₀ CTCGAGGAGCTCAGGATCCCG (73 mer)
DAL-N-40	5' AGGAATTCAGATCTCCCTGCAG (N) ₄₀ CTCGAGGAGCTCAGGATCCCG (83 mer)

Form and Storage

DNA libraries are provide in 10 mM Tris, pH 7.4, 1 mM EDTA (or see lot sp. conc on the vial) or lyophilized in the same buffer. Reconstitute the powder in distilled water (DNase free). Store at -70oC in suitable size aliquots.

General references:

Tian-Wen Wang. Molecular Biotechnology Volume 34, Number 1, 55-68.

Related Items

Catalog#	Product Description
DAL-AS-100	19 mer, Antisense primer; DNA aptamer
DAL-N-20	20 bp random library with flanking sequence; DNA aptamer
DAL-N-30	30 bp random library with flanking sequence; DNA aptamer
DAL-N-40	40 bp random library with flanking sequence; DNA aptamer
DAL-PS-100	21 mer, Sense primer; DNA aptamer

DAL-N-203040

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