ALPHA DIAGNOSTIC INTERNATIONAL

Product Data Sheet

Cat#: ☐ AD-149-U
Cat#: ☐ AD-149-B, Biotin labeled
Cat#: ☐ AD-149-F, FITC labeled

Product Description: TGF-ß1 (T18_1_3)

Aptamer Type: DNA

Sequence: 5'-CGCTCGGCTTCACGAGATTCGTGTCGTTGTGTCCTGTACCCGCCTTGACCAGTCACTCTAGAGCATCCGGACTG-3', 74-mer

Size 100 nM or custom

Mol. Wt: 23064.62 g/mole

GC content: 58.11%

Purity: >95%

Storage: Store at -20° C

General information:

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. Natural aptamers also exist in riboswitches. Peptide aptamers consist of a short variable peptide domain, attached at both ends to a protein scaffold. Aptamers are selected repeated rounds of in vitro selection or equivalently, SELEX (**S**ystematic **E**volution of **L**igands by **Ex**ponential Enrichment) to bind to nucleic acid, proteins, small organic compounds, and even entire organisms. They also function as highly specific affinity ligand by molecular interaction based on the three dimensional folding pattern. The three dimensional complex shape of a single stranded oligonucleotide is primarily due to the base composition led intra-molecular hybridization that initiates folding to a particular molecular shape. This molecular shape assists in binding through shape specific recognition to it targets leading to considerable three dimensional structure stability and thus the high degree of affinity. Theoretically it is possible to engineer and select aptamers virtually against any molecular target; aptamers have been selected for small molecules (e.g. ATP), peptides (Hisx6), proteins (Erythropoietin or EPO) as well as whole viruses and bacteria.

TGF-ß1 apatmer is available in unlabelled, FITC and Biotinylated form.

References: Kang et al. Bioorganic & Medicinal Chemistry Letters, 18 (2008): 1835-1839

Related items:

Catalog#	ProdDescription
TGFA15-R-1000	Human Recombinant Transforming Growth Factor-alpha (TGF-alpha), biologically active
TGFA15-R-20	Human Recombinant Transforming Growth Factor-alpha (TGF-alpha), biologically active
TGFA15-R-100	Human Recombinant Transforming Growth Factor-alpha (TGF-alpha), biologically active
SP-101334-5	Pro-TGF-a (AA: His-Ala-Asp-Leu-Leu-Ala-Val-Val-Ala-Ala-Ser-Gln) (MW: 1194.4)
SP-86724-5	Transforming Growth Factor β1 Peptide, TGF - β1 (60 - 66), amide (AA: Lys-Val-Leu-Ala-Leu-Tyr-Asn-Lys-NH2) (MW: 947.20)
SP-89772-1	"TGF α(34-43) (rat) (AA: Cys-His-Ser-Gly-Tyr-Val-Gly-Val-Arg-Cys (Disulfide bridge:Cys1-Cys10)) (MW: 1078.25)"
AD-149-B	TGF-ß1 (T18_1_3) , DNA Aptamer, Biotinylated
AD-149-F	TGF-ß1 (T18_1_3) , DNA Aptamer, FITC labeled
AD-149-U	TGF-ß1 (T18_1_3) , DNA Aptamer, unlabeled
MA-20076	Mouse Monoclonal Anti-Human TGF beta(transforming growth factor beta)

AD-149-TGF-Beta-1-DNA-Aptamer 150420A

Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, San Antonio, TX 78244, USA; **Email**: service@4adi.com
☎ (800) 786-5777; (210) 561-9515; **Fax**: (210) 561-9544; **Web Site**: www.4adi.com