

# Seraseq® Fusion RNA Reference Materials

THE MOST COMPREHENSIVE REFERENCE MATERIALS FOR RNA FUSIONS

## HIGHLIGHTS

HIGHLY MULTIPLEXED  
REFERENCE MATERIAL  
CONTAINING CLINICALLY-  
SIGNIFICANT RNA  
FUSIONS PRIMARILY  
FOUND IN SOLID TUMORS

QUANTIFIED TRANSCRIPT  
LEVELS ALLOW EASY  
LIMIT OF DETECTION  
STUDIES TO ESTABLISH  
ASSAY SENSITIVITY.

HIGH-QUALITY  
MANUFACTURED  
REFERENCE MATERIAL;  
GUARANTEES  
CONSISTENT  
GROUND TRUTH

## INTRODUCTION

The field of oncology is rapidly translating the volumes of genomic and genetic discoveries from the past decade into routine clinical care. Detection of difficult structural variants via Next-Generation Sequencing (NGS) is an area where highly multiplexed assays have started to replace manual fluorescent in-situ hybridization (FISH).

SeraCare has developed Seraseq Fusion RNA reference materials in a highly multiplexed format to match these new highly multiplexed NGS assays. This product is offered in both a purified RNA format (Seraseq Fusion RNA Mix v4) for ease of use in evaluating library preparation and sequencing, as well as a full-process FFPE reference material (Seraseq FFPE Fusion RNA Reference Material v4) to assess performance starting with pre-analytical steps. Both formats offer the most comprehensive panel of fusion RNAs (Table 1) in any commercially available reference material.

## FUSIONS INCLUDED IN THE SERASEQ FUSION RNA REFERENCE MATERIAL

CCDC6-RET	EML4-ALK	KIF5B-RET	PAX8-PPARG1	TMPRSS2-ERG
CD74-ROS1	ETV6-NTRK3	LMNA-NTRK1	SLC34A2-ROS1	TPM3-NTRK1
EGFR Variant III	FGFR3-BAIAP2L1	MET ex 14 Skipping	SLC45A3-BRAF	
EGFR-SEPT14	FGFR3-TACC3	NCOA4-RET	TFG-NTRK1	

## FEATURES AND BENEFITS

- Determine your assay sensitivity across 18 clinically relevant gene fusions, an exon-skipping variant as well as a multi-exon deletion, in a single run.
- Eliminate time and cost associated with sourcing and processing individual cell lines that are positive for a single cancer-relevant mutation or gene fusion.
- Select the format that best fits your needs whether you are developing, validating, or monitoring a clinical NGS fusion RNA assay.
- Easily perform limit of detection (LoD) studies using transcript level established by highly sensitive digital PCR assays.
- Manufactured within cGMP compliant, ISO 13485-certified facilities.

## ABOUT SERACARE

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TO THE DIAGNOSTIC  
TESTING INDUSTRY  
FOR OVER 30 YEARS

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CONTROL PRODUCTS,  
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AND TECHNOLOGIES  
TO PROVIDE  
ASSURANCE IN  
DIAGNOSTIC ASSAY  
PERFORMANCE AND  
TEST RESULTS

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RNA Fusion	5' Partner	3' Partner	HGVS Name
CCDC6-RET	CCDC6 ex 1	RET ex 12	CCDC6{NM_005436.5}:r.1_435_RET{NM_020975.6}:r.2327_5617
CD74-ROS1	CD74 ex 6	ROS1 ex 34	CD74{NM_001025159.2}:r.1_812_ROS1{NM_029444.2}:r.5757_7368
EGFR Variant III	EGFR ex 1	EGFR ex 8	EGFR{NM_005228.5}:r.350_1150del
EGFR-SEPT14	EGFR ex 24	SEPT14 ex 10	EGFR{NM_005228.5}:r.1_3207_SEPT14{NM_207366.3}:r.1200_3752
EML4-ALK	EML4 ex 13	ALK ex 20	EML4{NM_019063.4}:r.1_1763_ALK{NM_004304.4}:r.4125_6265
ETV6-NTRK3	ETV6 ex 5	NTRK3 ex 15	ETV6{NM_001987.4}:r.1_1283_NTRK3{NM_001012338.2}:r.1892_3004
FGFR3-BAIAP2L1	FGFR3 ex 17	BAIAP2L1 ex 2	FGFR3{NM_000142.4}:r.1_2530_BAIAP2L1{NM_018842.4}:r.315_3682
FGFR3-TACC3	FGFR3 ex 17	TACC3 ex 11	FGFR3{NM_000142.4}:r.1_2530_TACC3{NM_006342.3}:r.2066_2799
KIF5B-RET	KIF5B ex 24	RET ex 11	KIF5B{NM_004521.2}:r.1_3231_RET{NM_020975.6}:r.2070_5617
LMNA-NTRK1	LMNA ex 2	NTRK1 ex 10	LMNA{NM_170707.3}:r.1_762_NTRK1{NM_001012331.1}:r.1290_2647
MET ex 14 Skipping	MET ex 13	MET ex 15	MET{NM_001127500.3}:r.3338_3478del
NCOA4-RET	NCOA4 ex 8	RET ex 12	NCOA4{NM_001145260.1}:r.1_1014_RET{NM_020975.6}:r.2327_5617
PAX8-PPARG1	PAX8 ex 9	PPARG1 ex 3	PAX8{NM_003466.4}:r.1_1253_PPARG{NM_138712.3}:r.246_1892
SLC34A2-ROS1	SLC34A2 ex 4	ROS1 ex 34	SLC34A2{NM_006424.2}:r.1_460_ROS1{NM_029444.2}:r.5757_7368
SLC45A3-BRAF	SLC45A3 ex 1	BRAF ex 8	SLC45A3{NM_033102.3}:r.1_109_BRAF{NM_004333.5}:r.1206_4560
TFG-NTRK1	TFG ex 5	NTRK1 ex 9	TFG{NM_006070.5}:r.1_851_NTRK1{NM_001012331.1}:r.1234_2647
TMPRSS2-ERG	TMPRSS2 ex 1 (5' UTR)	ERG ex 2	TMPRSS2{NM_005656.3}:r.1_78_ERG{NM_004449.4}:r.124_5042
TPM3-NTRK1	TPM3 ex 7	NTRK1 ex 9	TPM3{NM_153649.3}:r.1_794_NTRK1{NM_001012331.1}:r.1234_2647

**Table 1: Gene fusions and genomic coordinates**

## ORDERING INFORMATION

Each part code is available for individual purchase.

Product	Format	Part Code	Concentration	Volume	Total Mass
Seraseq FFPE Fusion RNA Reference Material v4	Extraction Required - FFPE	0710-0496	1 FFPE curl / vial	10 µm	>400 ng*
Seraseq Fusion RNA Mix v4	No extraction Required - Purified RNA in buffer	0710-0497	25ng/µL	25 µL	625 ng

\* Based on Qiagen AllPrep RNA extraction kit and Qubit RNA HS quantitation assay.

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MKT-00443-02