

CERTIFICATE OF ANALYSIS

For Research Use Only

Not for Use in Diagnostic Procedures

Product Description: Seraseq™ Tumor Mutation DNA Mix v2 AF10, RUO
 Material No: 0710-0094 Batch No: 10372296
 Volume: 25 µL Concentration: 25 ng/µL
 Date of Manufacture: 30NOV2016 Expiration Date: 16NOV2019
 Test Method: In house validated, allele specific, digital PCR assays

Mutation	Average dPCR Allele Frequency
AKT1 COSM33765	11.1
APC COSM13127	10.1
APC COSM18561	8.7
ATM COSM21924	11.1
BRAF COSM476	10.3
CTNNB COSM5664	9.2
EGFR COSM6224	10.6
EGFR COSM6225	10.1
EGFR COSM6240	9.9
EGFR COSM12378	9.9
ERBB2 COSM682	9.3
FGFR3 COSM715	11.7
FLT3 COSM783	10.3
FOXL2 COSM33661	12.0
GNA11 COSM52969	10.5
GNAQ COSM28758	10.3
GNAS COSM27887	10.5
IDH1 COSM28747	9.8
JAK2 COSM12600	9.9
KIT COSM1314	10.1

Mutation	Average dPCR Allele Frequency
KRAS COSM521	10.2
MPL COSM18918	10.5
NPM1 COSM17559	9.7
NRAS COSM584	10.1
PDGFRA COSM736	10.6
PDGFRA COSM28053	8.1
PIK3CA COSM763	10.0
PIK3CA COSM775	10.0
PIK3CA COSM12464	9.5
PTEN COSM4986	8.9
PTEN COSM5809	8.9
RET COSM965	10.8
SMAD4 COSM14105	10.4
TP53 COSM6530	8.8
TP53 COSM10660	9.9
TP53 COSM10662	9.5
TP53 COSM10648	8.9
TP53 COSM18610	Not Assayed
NCOA4-RET	10.1
TPR-ALK	9.0

Approval:

Prepared By: *[Signature]* Date: 22 OCT 2018
 QA Verified By: *[Signature]* Date: 23 OCT 2018