

ONCOMINE COMPREHENSIVE ASSAY PLUS

PATHOLOGY SOLUTIONS ARE IN OUR DNA



What is the Oncomine Comprehensive Assay?

The Oncomine Comprehensive Assay Plus (OCAPLUS) is a Next Generation Sequencing (NGS) test that allows for extensive solid tumour genomic profiling based on the analysis of more than 500 genes, including mutations, fusions, and copy number variations (CNVs).

This allows the detection of several relevant diagnostic, prognostic, as well as therapeutic solid tumour biomarkers, all on a single testing platform.

How does the Oncomine Comprehensive Assay differ from the Oncomine Precision Assay (OPANGS)?

The OCAPLUS covers a far larger spectrum of tumour associated genetic biomarkers (50 vs 500) (component A), and can also predict response to both PARP (by assessing genomic stability) (component B), and immune check point inhibitors (by determining tumour mutational burden (TMB) and microsatellite instability) respectively (component C). The TMB component of this assay can be requested in isolation.

Pertaining to costs, the OCAPLUS assay is cheaper if compared to the cumulative cost of performing each test component individually.



FAST FACTS

HOW TO REQUEST:

- Contact the relevant Histopathology laboratory where the case was reported
- Request OCAPLUS or TMB

TEST RESULTS:

- The electronic report can be expected in 10-14 working days

For more information, contact
012 678 0645 or email ngs@ampath.co.za



COMPONENT A

Detection of relevant solid tumour diagnostic, prognostic and therapeutic biomarkers through:

- Single gene mutations, fusions, and CNVs.



COMPONENT B

Predicts response to PARP inhibitor therapy through detection of:

- Homologous recombination deficiency
- BRCA1/2 and homologous recombination repair pathways
- Genomic instability
- Loss of heterozygosity



COMPONENT C

Predicts response to immune check inhibitors through detection of:

- Tumour mutational burden
- Microsatellite instability

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List of genes relevant to various solid tumours included in the OCAPLUS panel

Breast Cancer		Ovarian Cancer		Endometrial cancer		Colorectal cancer	
ATM BARD1 BRIP1 BRCA1 BRCA2 CDK12 CHEK2 ERBB2 FANCD2 PALB2 PPP2RA TP53 RAD54L RAD51B	ESR1 PIK3CA	ATM BARD1 BRCA1 BRCA BRAF BRIP1 CDK12 CHEK1 CHEK2	ERBB2 FANCL FOXL2 PALB2 RAD51B RAD51C RAD51D RAD54L	BRCA2 CTNNB1 ERBB2 ESR1	FOXO1 POLE SMARCA4 TP53	BRAF ERBB2 HRAS KRAS	NRAS PIK3CA PTEN
Liver Cancer		Gastric and Oesophageal Cancer		Prostate Cancer		Kidney Cancer	
ARID1A ARID2 AXIN1 CCND1 CDKN2A CTNNB1 IDH1 IDH2 JAK1 KEAP	KRAS MYC NFE2L2 PIK3CA RB1 RIT1 TERT TP53 TSC2	APC ARID1A CDKN2A CTNNB1 EGFR ERBB2 ERBB3 FBXW7 GNAS	KMT2C KMT2D KRAS MYC PIK3CA PTEN RNF43 SMAD4 TP53	AKT1 APC AR BRAF BRCA2 CDK12 CTNNB1 ERG FOXA1 HRAS IDH1	KDM6A KMT2D KRAS MED12 MYC PIK3CA PIK3R1 PTEN RB1 SPOP TP53	ATM BAP1 KDM5C MET MTOR NF2 PBRM1	PIK3CA PTEN SETD2 SMARCB1 TP53 TSC1 TSC2
Urogenital Cancer		Lung Cancer		Melanoma		Lymphoma	
AKT1 ARID1A ATM BRAF CCND1 CCNE1 CDKN1A CDKN2A CTNNB1 E2F3 ERBB2 ERBB3 ERCC2	FGFR2 FGFR3 HRAS KDM6A KRAS MDM2 PIK3CA PPARG PTEN RB1 TP53 TSC1	AKT1 ALK BRAF CTNNB1 DDR2 EGFR ERBB2 ERBB4 FBXW7 FGFR1 FGFR2	FGFR3 KRAS MED12 MYC PIK3CA PIK3R1 PTEN RB1 SPOP TP53	AKT3 ARID2 BRAF CCND1 CDK4 CDKN2A CTNNB1 ERBB4 EZH2 GNA11 GNAQ HRAS IDH1 KIT	KRAS MAP2K1 MDM2 MITF NF1 NRAS PIK3CA PPP6C PTEN RAC1 RB1 TERT TP53	ARID1A ATM B2M BCL2 BCL6 BRAF BTK CARD11 CD79B CDKN2A CREBBP EZH2	GNA13 KMT2D MTOR MYC MYD88 PIM1 SF3B1 SOCS1 TNFAIP3 TNFRSF14 TP53 XPO1
CNS tumours		Bone and Soft Tissue Cancer				All Cancers	
APC ATRX CDKN2A CDKN2B EGFR H3F3A H2BC5 H3C2	IDH1 IDH2 MYCN PTCH RELA TERT TP53	ACVR1 AKT1 ALK APC ARAF ATRX BLM BRAF CDK4 CDKN2A CDKN2B CHEK2 CREBBP CTNNB1 DICER	EGFR ERBB3 ETV1 ETV4 FBXW7 FGFR1 FGFR2 FGFR4 FLT4 GNAS HRAS H3F3A H3F3B IDH1 IDH2	KDR KIT KRAS MAP2K1 MDM2 MEN1 NF1 NF2 NOTCH1 NRAS PDGFRA PIK3CA PTCH1 PTEN PTPN11	RB1 RELA SDHA SDHB SDHC SDHD SMARCA4 SMARCB1 STAG2 STAT6 TFE3 TP53 TSC1 TSC2 VHL YAP1	NTRK1 NTRK2 NTRK3	RET HRD MSI TMB