Cheatography

# Lung Cancer Cheat Sheet Cheat Sheet

by ACD Marketing Team (ACD Marketing) via cheatography.com/36805/cs/11873/

## One Minute Pitch

Lung tumors are highly heterogeneous, with great variability between individual patients, cancer types, and stages, as well as intra-tumor heterogeneity. This variability poses a considerable challenge in identifying and validating clinically relevant lung cancer biomarkers. Therefore, spatially-mapped gene expression at the cellular level is crucial to understand the cell-to-cell interactions in the tumor and the cellular makeup within the complex tumor microenvironment (TME).

## Key Selling Point

Assessment of predictive markers for lung cancer

When antibodies are not available e.g. ARNTL2

Characterization of secreted proteins

Validation of transcriptome data

Detection of lncRNAs in lung cancer - e.g. LINC00473 could be used as a surrogate biomarker for LKB1 in lung cancer samples.

Detection of lncRNAs in lung cancer - ACD60 NSCLC lncRNA study

Detection of immune cell checkpoint and functional lung cancer biomarkers in the TME - ACD 60 NSCLC immuno-oncology study

## Marketing Materials

**Lung Cancer related publications:** http://bit.ly/2rtGXny

**Scientific Poster:**

**lncRNA in lung Cancer:** Coming soon

**Application note:** "Detection of immune cell checkpoint and functional markers in the tumor microenvironment by the RNA in situ hybridization RNAscope® assay'

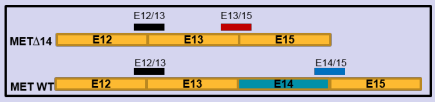
## Lung Cancer Related Probes

AGER AGR2 AKT1 ANXA5 APBA1 APC BCL2 BIRC5 BRAF CA4 CADM1 CDH1 CDH13 CDKN1C CDKN2A CDKN2B CEACAM5 CEACAM6 CLCA2 CLDN18 CLIC5 COL11A1 CP CSF3 CXCL12 CXCL13 CYP1B1 DLC1 DSG3 DUSP6 EGFR ERBB2 ERBB3 FABP4 FHIT GPM6A GREM1 HGF HMMR HRAS IRF4 KRAS KRT14 KRT5 LCK LGSN MET MGMT MKI67 MLH1 MMD MMP1 MMP12 MMP9 MTHFR NF1 NFKB1 NKX2-1 OPCML PAX5 PRDM2 PTGS2 RASSF1 RASSF2 RB1 SCGB1A1 SFRP1 SFTA3 SFTPC SOSTDC1 SPINK1 SPP1 SPRR1A STAT1 STAT2 TCF21 TERT TGFB1 TNF TOP2A TOX3 TP53 VEGFA WIF1

## Special Case: MET-delta 14 in lung cancer

Nearly all of the MET exon 14 mutations described to date cause skipping of MET exon 14 during pre-mRNA splicing.
Skipping of exon 14 in the MET gene results in impaired c-Met receptor degradation, constitutive activation of the MET receptor, and oncogenic transformation of MET.
This variant, referred to as METΔ14, is a gain-of-function phenotype that can respond positively to some therapeutics and is present in a variety of cancer types, particularly lung cancer, where it is present in approximately 3% of non-small cell lung carcinoma cases.
Detection of alterations in MET exon 14 could aid in identifying patients likely to benefit from MET inhibitors. The BaseScope assay for exon junction detection is the solution here.

## MET-Delta 14 probe design

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