### Selective Labeling and Identification of the Tumor Cell Proteome of Pancreatic Cancer In Vivo

Nancy G. Azizian<sup>1, 2</sup>, Delaney K. Sullivan<sup>3</sup>, Litong Nie<sup>4</sup>, Sammy Pardo<sup>5</sup>, Dana Molleur<sup>5</sup>, Junjie Chen<sup>4</sup>, Susan T. Weintraub<sup>5</sup>, Yulin Li<sup>1, 2\*</sup>

<sup>1</sup>Center for Immunotherapy Research, Houston Methodist Research Institute, Houston, TX 77030, USA; <sup>2</sup>Department of Medicine, Weill Cornell Medical College, New York, NY 10065, USA; <sup>3</sup>UCLA-Caltech Medical Scientist Training Program, David Geffen School of Medicine, University of California, Los Angeles, Los Angeles, CA 90095, USA; <sup>4</sup>Department of Experimental Radiation Oncology, Division of Radiation Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX 77030, USA; <sup>5</sup>Department of Biochemistry and Structural Biology, The University of Texas Health Science Center at San Antonio, San Antonio, TX 78229, USA.

### Supplementary data

#### **Supplementary figures**

Supplementary Fig S1. Full size image of the Western blot presented in Figure 2A.

**Supplementary Fig S2.** Detection of ANL-labeled proteins by TAMRA-DBCO and SDS-PAGE in cell lines with or without MetRS <sup>L274G</sup> transgene.

**Supplementary Fig S3.** α-SMA antibody identifies stromal fibroblasts in the tumor bulk.

**Supplementary Fig S4.** Densitometric analysis of Coomassie blue and TARMA-alkyne stained SDS-PAGE gel for tumor sample lanes 5-11.

**Supplementary Fig S5.** Pearson correlation of DIA-MS data from the BONCAT (S5A), and the Bulk samples (S5B).

**Supplementary Fig S6.** Venn diagram of the number of proteins identified by BONCAT enrichment in the ANL-labeled samples compared to the Met-labeled samples.

**Supplementary Fig S7.** IHC analysis of protein candidates preferentially present in pancreatic tumor cells.

### Supplementary tables (Provided as separate .xlsx file)

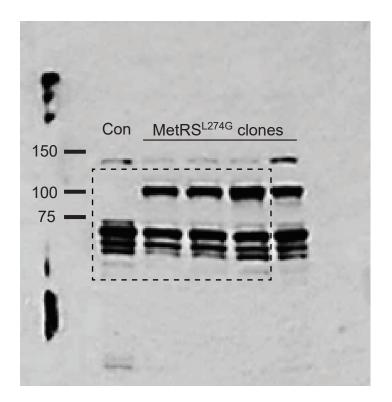
**Supplementary Table S1.** List of proteins identified in BONCAT-enriched samples by DIA-MS. **Supplementary Table S2.** List of proteins identified in the tumor bulk lysates by DIA-MS.

**Supplementary Table S3**. Ratio of protein abundance in BONCAT-ANL versus Bulk-ANL samples.

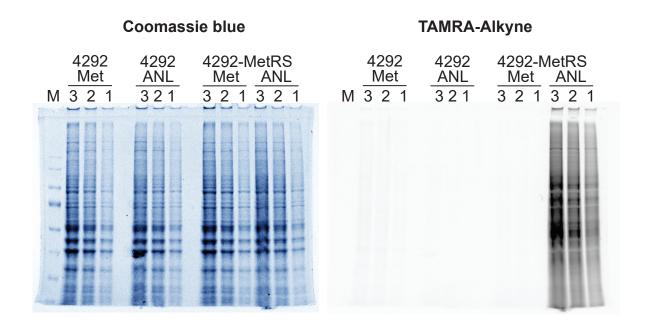
**Supplementary Table S4**. Levels of marker proteins from tumor and non-tumor cells within the tumor microenvironment.

Supplementary Table S5. GO term analysis of proteins enriched in tumor cells.

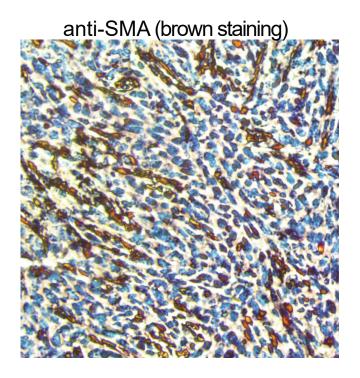
Supplementary Table S6. GO term analysis of proteins enriched in the tumor microenvironment.



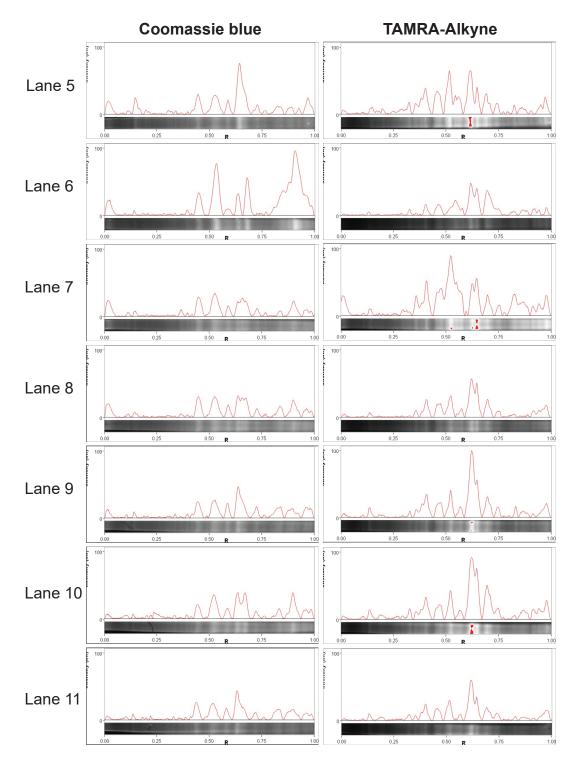
**Supplementary Fig S1.** Full size image of the Western blot presented in Figure 2A. The molecular weight of the protein ladder is labeled on the left side.



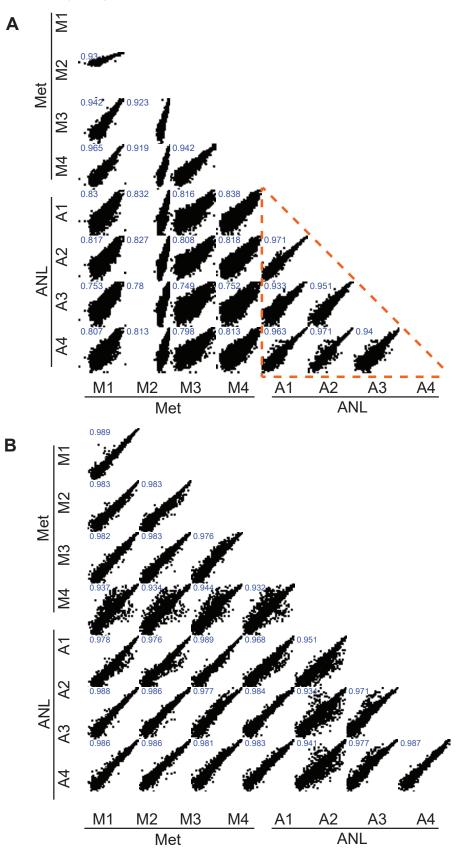
**Supplementary Fig S2.** Detection of ANL-labeled proteins by TAMRA-DBCO and SDS-PAGE in cell lines with or without MetRS <sup>L274G</sup> transgene.



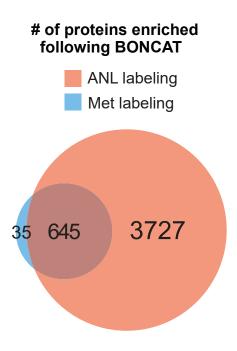
**Supplementary Fig S3.** α-SMA antibody identifies stromal fibroblasts in the tumor bulk.



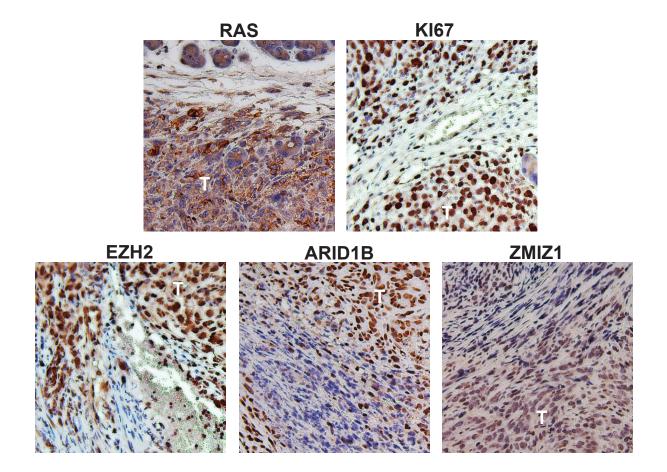
**Supplementary Fig S4.** Densitometric analysis of Coomassie blue and TARMA-alkyne stained SDS-PAGE gel for tumor sample lanes 5-11.



**Supplementary Fig S5.** Pearson correlation of DIA-MS data from the BONCAT (S5A), and the Bulk samples (S5B). The correlation coefficients are labeled above the dot plots. Dashed triangle indicates the correlation among BONCAT-ANL samples.



**Supplementary Fig S6.** Venn diagram of the number of proteins identified by BONCAT enrichment in the ANL-labeled samples compared to the Met-labeled samples.



**Supplementary Fig S7.** IHC analysis of protein candidates preferentially present in pancreatic tumor cells. The tumor cells with dark brown staining are indicated with "T".