**DEGs control vs SC**

**p : 1.21 E-7**  
ALOX5 [ "asthma", "Radiation Pneumonitis", "pulmonary fibrosis", "pulmonary hypertension", "pulmonary tuberculosis", "pleuropneumonia", "exercise-induced bronchoconstriction", "Pneumococcal Pneumonia", "pulmonary edema", "lung adenocarcinoma" ]

ARHGAP44 [ "lung squamous cell carcinoma", "lung adenocarcinoma", "lung large cell carcinoma", "lung carcinoma" ]

BRCA1 [ "lung non-small cell carcinoma", "lung cancer" ]

BTK [ "lung adenocarcinoma", "lung non-small cell carcinoma", "Streptococcus pneumonia", "Pneumococcal Pneumonia" ]

CFTR [ "lung cancer" ]

CD74 [ "lung non-small cell carcinoma" ]

CYP24A1 [ "Lung Neoplasms", "lung non-small cell carcinoma", "lung adenocarcinoma", "lung cancer", "lung small cell carcinoma", "lung carcinoma" ]

E2F2 [ "lung non-small cell carcinoma" ]

GCLC [ "cystic fibrosis", "Lung Neoplasms", "lung non-small cell carcinoma", "pulmonary emphysema" ]

LTF [ "lung non-small cell carcinoma", "Lung Injury" ]

**p : 5.60 E-9**  
ABCC2 [ "lung non-small cell carcinoma" ]

ADAM28 [ "lung adenocarcinoma", "lung metastasis", "asbestos-related lung carcinoma", "lung non-small cell carcinoma", "Lung Neoplasms" ]

ALDH18A1 [ "lung adenocarcinoma" ]

ALX4 [ "Lung Neoplasms", "lung cancer", "bronchiolo-alveolar adenocarcinoma", "lung adenocarcinoma" ]

CAPG [ "lung adenocarcinoma" ]

CDH1 [ "pulmonary fibrosis", "lung adenocarcinoma", "asthma" ]

LAMC2 [ "lung non-small cell carcinoma", "lung small cell carcinoma", "lung squamous cell carcinoma" ]

NNAT [ "lung non-small cell carcinoma" ]

PREX2 [ "lung non-small cell carcinoma", "lung squamous cell carcinoma" ]

ROS1 [ "lung adenocarcinoma", "lung non-small cell carcinoma", "lung sarcomatoid carcinoma" ]

**p : 1.09 E-2**

SOX30 [ "lung cancer", "lung non-small cell carcinoma", "lung metastasis", "lung adenocarcinoma", "lung squamous cell carcinoma", "Lung Neoplasms" ]

TNC [ "lung cancer" ]

FGFR3 [ "lung squamous cell carcinoma" ]

FGF10 [ "interstitial lung disease", "lung adenocarcinoma", "viral pneumonia" ]

TP63 [ "lung adenocarcinoma", "Lung Neoplasms", "lung cancer" ]

**p : 8.37 E-5**  
CA12 [ "lung non-small cell carcinoma", "lung cancer", "lung metastasis", "Lung Neoplasms" ]

ENO1 [ "lung non-small cell carcinoma", "lung adenocarcinoma" ]

FAP [ "lung squamous cell carcinoma", "lung non-small cell carcinoma" ]

FAT1 [ "lung non-small cell carcinoma", "lung small cell carcinoma" ]

NDC80 [ "lung non-small cell carcinoma" ]

NOTCH3 [ "Lung Neoplasms", "Pulmonary Arterial Hypertension", "lung non-small cell carcinoma" ]

RUNX1T1 [ "lung small cell carcinoma" ]

SLC4A4 [ "lung adenocarcinoma" ]

TP73 [ "lung cancer", "Lung Neoplasms", "lung squamous cell carcinoma", "respiratory failure", "lung non-small cell carcinoma", "lung small cell carcinoma" ]

**p : 2.87 E-5**  
ABCB1 [ "pulmonary tuberculosis", "lung non-small cell carcinoma", "asthma" ]

BIRC5 [ "pulmonary hypertension", "lung squamous cell carcinoma", "malignant pleural mesothelioma", "lung adenocarcinoma", "Lung Neoplasms", "lung non-small cell carcinoma" ]

DNMT3B [ "lung small cell carcinoma", "lung adenocarcinoma", "lung cancer" ]

ICAM1 [ "bacterial pneumonia", "Chronic Bronchitis", "newborn respiratory distress syndrome", "lung non-small cell carcinoma", "asthma", "bronchus carcinoma", "adult respiratory distress syndrome", "chronic obstructive pulmonary disease", "pulmonary fibrosis", "pulmonary hypertension", "idiopathic interstitial pneumonia", "paracoccidioidomycosis", "allergic bronchopulmonary aspergillosis", "Lung Reperfusion Injury", "pneumonia", "Acute Lung Injury", "Lung Injury" ]

MMP2 [ "pulmonary fibrosis", "pulmonary emphysema", "Acute Lung Injury", "paracoccidioidomycosis", "pulmonary embolism", "lung non-small cell carcinoma" ]

PHGDH [ "lung non-small cell carcinoma" ]

PTHLH [ "lung non-small cell carcinoma" ]

TF [ "malignant mesothelioma", "lung adenocarcinoma" ]

**DEGs control vs AD**

**p : 4.41 E-9**  
ABCC2 [ "lung non-small cell carcinoma" ]

ALOX5 [ "asthma", "Radiation Pneumonitis", "pulmonary fibrosis", "pulmonary hypertension", "pulmonary tuberculosis", "pleuropneumonia", "exercise-induced bronchoconstriction", "Pneumococcal Pneumonia", "pulmonary edema", "lung adenocarcinoma" ]

ARHGAP44 [ "lung squamous cell carcinoma", "lung adenocarcinoma", "lung large cell carcinoma", "lung carcinoma" ]

BRCA1 [ "lung non-small cell carcinoma", "lung cancer" ]

BTK [ "Pneumococcal Pneumonia", "lung non-small cell carcinoma", "lung adenocarcinoma", "Streptococcus pneumonia" ]

CYP24A1 [ "Lung Neoplasms", "lung non-small cell carcinoma", "lung adenocarcinoma", "lung cancer", "lung small cell carcinoma", "lung carcinoma" ]

E2F2 [ "lung non-small cell carcinoma" ]

GCLC [ "cystic fibrosis", "pulmonary emphysema", "Lung Neoplasms", "lung non-small cell carcinoma" ]

MEOX1 [ "lung adenocarcinoma", "lung non-small cell carcinoma" ]

**p : 7.99 E-6**  
ADAM28 [ "lung adenocarcinoma", "asbestos-related lung carcinoma", "lung non-small cell carcinoma", "Lung Neoplasms", "lung metastasis" ]

ALDH18A1 [ "lung adenocarcinoma" ]

CDH1 [ "pulmonary fibrosis", "asthma", "lung adenocarcinoma" ]

FGFR2 [ "primary pulmonary hypertension", "idiopathic pulmonary fibrosis", "lung squamous cell carcinoma", "Lung Neoplasms", "viral pneumonia", "Lung Reperfusion Injury" ]

LAMA3 [ "lung small cell carcinoma", "interstitial lung disease 2" ]

LAMC2 [ "lung squamous cell carcinoma", "lung non-small cell carcinoma", "lung small cell carcinoma" ]

PREX2 [ "lung non-small cell carcinoma", "lung squamous cell carcinoma" ]

SOX30 [ "Lung Neoplasms", "lung squamous cell carcinoma", "lung metastasis", "lung cancer", "lung adenocarcinoma", "lung non-small cell carcinoma" ]

**p : 3.00 E-6**  
CA12 [ "lung non-small cell carcinoma", "lung cancer", "lung metastasis", "Lung Neoplasms" ]

ENO1 [ "lung non-small cell carcinoma", "lung adenocarcinoma" ]

FAP [ "lung non-small cell carcinoma", "lung squamous cell carcinoma" ]

FAT1 [ "lung non-small cell carcinoma", "lung small cell carcinoma" ]

FGF10 [ "interstitial lung disease", "lung adenocarcinoma", "viral pneumonia" ]

NDC80 [ "lung non-small cell carcinoma" ]

RUNX1T1 [ "lung small cell carcinoma" ]

TRAF4 [ "lung adenocarcinoma" ]

CEACAM1 [ "Lung Neoplasms" ]

TFRC [ "Lung Neoplasms" ]

**p : 4.34 E-3**  
BIRC5 [ "pulmonary hypertension", "lung non-small cell carcinoma", "Lung Neoplasms", "lung squamous cell carcinoma", "lung adenocarcinoma", "malignant pleural mesothelioma" ]

DNMT3B [ "lung small cell carcinoma", "lung adenocarcinoma", "lung cancer" ]

MMP11 [ "lung non-small cell carcinoma" ]

PTHLH [ "lung non-small cell carcinoma" ]

TF [ "malignant mesothelioma", "lung adenocarcinoma" ]

**p : 6.73 E-6**  
CBX7 [ "Lung Neoplasms", "lung adenocarcinoma" ]

CHGA [ "lung non-small cell carcinoma" ]

E2F1 [ "lung non-small cell carcinoma", "lung small cell carcinoma", "lung adenocarcinoma", "lung squamous cell carcinoma" ]

GATA1 [ "lung cancer" ]

GNPNAT1 [ "lung adenocarcinoma" ]

MMP9 [ "lung non-small cell carcinoma", "pulmonary hypertension", "interstitial lung disease", "adult respiratory distress syndrome", "pulmonary tuberculosis", "asthma", "Lung Neoplasms", "pulmonary emphysema", "bronchiolitis obliterans", "pneumonia", "cystic fibrosis", "bacterial pneumonia", "chronic obstructive pulmonary disease", "pulmonary fibrosis", "pulmonary embolism", "bronchopulmonary dysplasia", "Lung Reperfusion Injury", "lymphangioleiomyomatosis", "paracoccidioidomycosis", "Hyperoxic Lung Injury", "Acute Lung Injury" ]

MXRA5 [ "lung non-small cell carcinoma" ]

TIMP3 [ "lung non-small cell carcinoma", "lung adenocarcinoma", "asthma" ]

**DEGs control vs LC**

**p : 4.74 E-6**ALOX5 [ "asthma", "Radiation Pneumonitis", "pulmonary fibrosis", "pulmonary hypertension", "pulmonary tuberculosis", "pleuropneumonia", "exercise-induced bronchoconstriction", "Pneumococcal Pneumonia", "pulmonary edema", "lung adenocarcinoma" ]

ARHGAP44 [ "lung squamous cell carcinoma", "lung adenocarcinoma", "lung large cell carcinoma", "lung carcinoma" ]

BRCA1 [ "lung non-small cell carcinoma", "lung cancer" ]

BTK [ "lung adenocarcinoma", "lung non-small cell carcinoma", "Streptococcus pneumonia", "Pneumococcal Pneumonia" ]

CFTR [ "asthma", "cystic fibrosis", "chronic obstructive pulmonary disease", "allergic bronchopulmonary aspergillosis", "pulmonary sarcoidosis", "Chronic Bronchitis", "lung cancer", "aspergillosis", "Staphylococcal Pneumonia" ]

CYP24A1 [ "Lung Neoplasms", "lung non-small cell carcinoma", "lung adenocarcinoma", "lung cancer", "lung small cell carcinoma", "lung carcinoma" ]

E2F2 [ "lung non-small cell carcinoma" ]

GCLC [ "cystic fibrosis", "Lung Neoplasms", "lung non-small cell carcinoma", "pulmonary emphysema" ]

MEOX1 [ "lung adenocarcinoma", "lung non-small cell carcinoma" ]

**p : 6.29 E-7**  
ABCC2 [ "lung non-small cell carcinoma" ]

ADAM28 [ "asbestos-related lung carcinoma", "lung metastasis", "lung adenocarcinoma", "lung non-small cell carcinoma", "Lung Neoplasms" ]

ALDH18A1 [ "lung adenocarcinoma" ]

CDH1 [ "lung adenocarcinoma", "pulmonary fibrosis", "asthma" ]

FOXP3 [ "asthma", "Lung Injury", "pulmonary tuberculosis", "bacterial pneumonia", "bronchiolitis obliterans", "Lung Neoplasms" ]

LAMC2 [ "lung squamous cell carcinoma", "lung small cell carcinoma", "lung non-small cell carcinoma" ]

PREX2 [ "lung non-small cell carcinoma", "lung squamous cell carcinoma" ]

ROS1 [ "lung sarcomatoid carcinoma", "lung adenocarcinoma", "lung non-small cell carcinoma" ]

SOX30 [ "lung metastasis", "lung cancer", "lung adenocarcinoma", "lung non-small cell carcinoma", "Lung Neoplasms", "lung squamous cell carcinoma" ]

**p : 2.68 E-4**  
CA12 [ "lung cancer", "lung non-small cell carcinoma", "Lung Neoplasms", "lung metastasis" ]

ENO1 [ "lung adenocarcinoma", "lung non-small cell carcinoma" ]

FGF10 [ "viral pneumonia", "interstitial lung disease", "lung adenocarcinoma" ]

FGFR2 [ "idiopathic pulmonary fibrosis", "Lung Neoplasms", "Lung Reperfusion Injury", "lung squamous cell carcinoma", "primary pulmonary hypertension", "viral pneumonia" ]

TP63 [ "lung cancer", "Lung Neoplasms", "lung adenocarcinoma" ]

**p : 3.00 E-6**  
ABCB1 [ "asthma", "lung non-small cell carcinoma", "pulmonary tuberculosis" ]

CEACAM1 [ "Lung Neoplasms" ]

DNMT3B [ "lung cancer", "lung adenocarcinoma", "lung small cell carcinoma" ]

FAP [ "lung squamous cell carcinoma", "lung non-small cell carcinoma" ]

FAT1 [ "lung non-small cell carcinoma", "lung small cell carcinoma" ]

NDC80 [ "lung non-small cell carcinoma" ]

PTHLH [ "lung non-small cell carcinoma" ]

RUNX1T1 [ "lung small cell carcinoma" ]

TRAF4 [ "lung adenocarcinoma" ]

**p : 1.65 E-3**  
BAMBI [ "lung non-small cell carcinoma" ]

BIRC5 [ "lung squamous cell carcinoma", "lung adenocarcinoma" ]

IRAK3 [ "lung adenocarcinoma" ]

MMP11 [ "lung non-small cell carcinoma" ]

MSH2 [ "lung adenocarcinoma" ]

PHGDH [ "lung non-small cell carcinoma" ]

TF [ "lung adenocarcinoma" ]