The LMMA ID is a 10-digit number (e.g. LMMA0000000089). Here we use an abbreviated form; “LMMA . . 3 digits” (e.g., LMMA . . 089); for easy viewing.

**LMMA . . 210** lower respiratory tract – P04-P30 (alveolar stage of mouse lung development)

- **LMMA . . 361** trachea
  - **LMMA . . 362** trachea bifurcation
  - **LMMA . . 365** trachea lumen
  - **LMMA . . 366** trachea wall

- **LMMA . . 415** tracheal mucosa
  - **LMMA . . 414** tracheal epithelium
  - **LMMA . . 590** basement membrane
  - **LMMA . . 590** tracheal epithelial cell
  - **LMMA . . 087** basal cell
  - **LMMA . . 125** chemosensory cell (syn: brush cell)
  - **LMMA . . 142** ciliated cell
  - **LMMA . . 143** club cell (syn: Clara cell; nonciliated secretory cell; bronchiolar exocrine cell)
  - **LMMA . . 238** intermediate airway progenitor cell
  - **LMMA . . 238** mucus cell (syn: mucous cell)
  - **LMMA . . 252** neuroendocrine cell
  - **LMMA . . 340** serous cell

- **LMMA . . 529** tracheal lamina propria
  - **LMMA . . 136** connective tissue cell
  - **LMMA . . 356** submucosal gland
  - **LMMA . . 356** submucosal gland epithelium
  - **LMMA . . 238** mucus cell (syn: mucous cell)
  - **LMMA . . 340** serous cell
  - **LMMA . . 415** tracheal submucosa
  - **LMMA . . 415** tracheal cartilaginous ring
  - **LMMA . . 592** annular ligament
  - **LMMA . . 183** hyaline cartilage
  - **LMMA . . 141** chondrocyte
  - **LMMA . . 302** extracellular matrix

- **LMMA . . 168** unclassified fibroblast
  - **LMMA . . 168** extracellular matrix
  - **LMMA . . 178** collagen fiber
  - **LMMA . . 180** elastic fiber
  - **LMMA . . 183** ground substance
  - **LMMA . . 529** glycosaminoglycan
  - **LMMA . . 178** glycoprotein
  - **LMMA . . 283** proteoglycan
  - **LMMA . . 320** reticular fiber
Note: The classification scheme for each bronchus above is the same as below.
Note: The classification scheme for the left lung and right lung middle, lower, and accessory lobes is the same as for the right lung upper lobe below:

LMMA . . 332  ━ right lung upper lobe
LMMA . . 605  ━ right lung upper lobe hilum
LMMA . . 039  ━ right upper lobe bronchiole
LMMA . . 140  ━ central bronchiole (syn: proximal bronchiole; primary bronchiole)
LMMA . . 138  ━ central bronchiolar lumen
LMMA . . 139  ━ central bronchiolar wall
LMMA . . 286  ━ central bronchiolar epithelium (syn: proximal bronchiolar epithelium)
LMMA . . 089  ━ basement membrane
LMMA . . 582  ━ bronchiolar epithelial cell
LMMA . . 142  ━ ciliated cell
LMMA . . 143  ━ club cell (syn: Clara cell; nonciliated secretory cell; bronchiolar exocrine cell)
LMMA . . 252  ━ neuroendocrine cell
LMMA . . 253  ━ neuroepithelial body
LMMA . . 252  ━ neuroendocrine cell
LMMA . . 384  ━ unclassified epithelial cell (syn: general epithelial cell; nonspecific epithelial cell)
LMMA . . 391  ━ variant club cell
LMMA . . 525  ━ bronchiolar connective tissue (syn: peribronchiolar connective tissue)
LMMA . . 136  ━ connective tissue cell
LMMA . . 356  ━ telocyte
LMMA . . 386  ━ unclassified fibroblast
LMMA . . 168  ━ extracellular matrix
LMMA . . 145  ━ collagen fiber
LMMA . . 158  ━ elastic fiber
LMM...180 | lateral bronchiole (syn: distal bronchiole; secondary bronchiole)
LMM...196 | lateral bronchiolar lumen
LMM...197 | lateral bronchiolar wall
LMM...433 | lateral bronchiolar epithelium (syn: distal bronchiolar epithelium)
LMM...089 | basement membrane
LMM...582 | bronchiolar epithelial cell
LMM...142 | ciliated cell
LMM...143 | club cell (syn: Clara cell; nonciliated secretory cell; bronchiolar exocrine cell)
LMM...252 | neuroendocrine cell
LMM...253 | neuroepithelial body
LMM...252 | neuroendocrine cell
LMM...384 | unclassified epithelial cell (syn: general epithelial cell; nonspecific epithelial cell)
LMM...391 | variant club cell
LMM...525 | bronchiolar connective tissue (syn: peribronchiolar connective tissue)
LMM...136 | connective tissue cell
LMM...356 | telocyte
LMM...386 | unclassified fibroblast
LMM...168 | extracellular matrix
LMM...145 | collagen fiber
LMM...158 | elastic fiber
LMM...180 | ground substance
LMM...529 | glycosaminoglycan
LMM...178 | glycoprotein
LMM...283 | proteoglycan
LMM...320 | reticular fiber
LMM...240 | bronchiolar smooth muscle (syn: peribronchiolar smooth muscle)
LMM...343 | smooth muscle cell
LMM...198 | terminal bronchiole
LMM...357 | terminal bronchiolar lumen
LMM...358 | terminal bronchiolar wall
LMM...457 | terminal bronchiolar epithelium
LMM...089 | basement membrane
LMM...582 | bronchiolar epithelial cell
LMM...142 | ciliated cell
LMM...143 | club cell (syn: Clara cell; nonciliated secretory cell; bronchiolar exocrine cell)
LMM...252 | neuroendocrine cell
LMM...253 | neuroepithelial body
LMM...252 | neuroendocrine cell
LMM...384 | unclassified epithelial cell (syn: general epithelial cell; nonspecific epithelial cell)
LMM...391 | variant club cell
LMM...525 | bronchiolar connective tissue (syn: peribronchiolar connective tissue)
LMM...136 | connective tissue cell
LMM...356 | telocyte
LMM...386 | unclassified fibroblast
right upper lobe alveolar parenchyma

alveolar duct

alveolar duct

alveolar duct wall

alveolar epithelium

alveolar epithelial cell

type I pneumocyte (syn: alveolar epithelial type I cell; AT1 cell; AEC1)
type II pneumocyte (syn: alveolar epithelial type II cell; AT2 cell; AEC2)
alveolar capillary bed (syn: alveolar capillary network)
alveolar capillary endothelium
basement membrane
pericyte
vascular endothelial cell
alveolar interstitial tissue (syn: alveolar interstitium; alveolar connective tissue; alveolar stroma; alveolar mesenchyme)
alveolar interstitial cell (syn: alveolar stromal cell; alveolar connective tissue cell)
lipofibroblast
matrix fibroblast
myofibroblast (syn: matrix synthesizing fibroblast)
pericyte
telecyte
proliferative fibroblast
unclassified fibroblast
extracellular matrix
collagen fiber
elastic fiber
ground substance
glycosaminoglycan
glycoprotein
proteoglycan
reticular fiber
alveolus
alveolar lumen
pulmonary surfactant (syn: lung surfactant)
Note: the classification scheme for “primary alveolar septum”, “alveolar septal crest”, and “secondary alveolar septum” is the same as below.

- alveolar epithelium
- basement membrane
- alveolar epithelial cell
- type I pneumocyte (syn: alveolar epithelial type I cell; AT1 cell; AEC1)
- type II pneumocyte (syn: alveolar epithelial type II cell; AT2 cell; AEC2)
- alveolar capillary bed (syn: alveolar capillary network)
- alveolar capillary endothelium
- basement membrane
- pericyte
- vascular endothelial cell
- alveolar interstitial tissue (syn: alveolar interstitium; alveolar connective tissue; alveolar stroma; alveolar mesenchyme)
- alveolar interstitial cell (syn stromal or connective tissue cell)
- lipofibroblast
- matrix fibroblast (syn: matrix synthesizing fibroblast)
- myofibroblast
- pericyte
- proliferative fibroblast
- proliferative myofibroblast
- telocyte
- unclassified fibroblast
- extracellular matrix
- collagen fiber
- elastic fiber
- ground substance
- glycosaminoglycan
- glycoprotein
- proteoglycan
- reticular fiber
- right upper lobe visceral pleura
- visceral connective tissue
- connective tissue cell
- reticular cell
- telocyte
- unclassified fibroblast
- extracellular matrix
- collagen fiber
- elastic fiber
- ground substance
- glycosaminoglycan
- glycoprotein
- proteoglycan

visceral connective tissue
visceral connective tissue
respiratory autonomic nervous system (syn: autonomic respiratory nervous system)

- pulmonary autonomic nerve
- non-adrenergic and non-cholinergic nerve (syn: sensory nerve)
- nerve fiber
- glial cell (syn: neuroglial cell; Schwann cell)
- postganglionic parasympathetic nerve (syn: cholinergic innervation)
- nerve fiber
- glial cell (syn: neuroglial cell; Schwann cell)
- postganglionic sympathetic nerve (syn: adrenergic innervation)
- nerve fiber
- glial cell (syn: neuroglial cell; Schwann cell)
- preganglionic parasympathetic nerve
- nerve fiber
- glial cell (syn: neuroglial cell; Schwann cell)
- pulmonary autonomic ganglion (syn: nerve cell cluster)
- autonomic neuron (syn: autonomic ganglion cell; autonomic ganglion neuron)
- glial cell (syn: neuroglial cell; Schwann cell)
- pulmonary nerve plexus
- left pulmonary nerve plexus
- left anterior pulmonary nerve plexus
- left posterior pulmonary nerve plexus
- right pulmonary nerve plexus
- right anterior pulmonary nerve plexus
- right posterior pulmonary nerve plexus
- general visceral nervous system
- general visceral afferent nerve (syn: sensory nerve)
- nerve fiber
- glial cell (syn: neuroglial cell; Schwann cell)
- visceral afferent sensory nerve terminal (syn: visceral afferent sensory nerve receptor)

respiratory immune system

- immune cell
- dendritic cell
- Langerhans cell
- myeloid cell
- granulocyte
- basophil (syn: basophilic leukocyte; basophilic granulocyte)
- eosinophil
- neutrophil
- macrophage (syn: histiocyte)
- alveolar macrophage
- interstitial macrophage (syn: lung tissue macrophage; pulmonary interstitial macrophage)
- mast cell
- megakaryocyte
- platelet
- monocyte
- lymphoid cell
- innate lymphoid cell
- natural killer cell (syn: non-T, non-B lymphocyte; large granular lymphocyte)
- lymphocyte
- B Lymphocyte (syn: B cell)
- plasma cell (syn: mature B lymphocyte)
- T Lymphocyte (syn: T cell)
- lymphoid tissue
- bronchus associated lymphoid tissue
- plasma cell (syn: mature B lymphocyte)
- lymph node
- connective tissue capsule
- trabecula
- cortex
- primary lymphoid follicle
- germinatal center (syn: central zone of follicle; reactive center of follicle)
- B Lymphocyte (syn: B cell)
- plasma cell (syn: mature B lymphocyte)
- endothelial sinus
- cortical sinus
- medullary sinus
- paratrabecular sinus (syn: trabecular sinus)
- subcapsular sinus
- medulla
- medullary cord
- B Lymphocyte (syn: B cell)
- plasma cell (syn: mature B lymphocyte)
- lymphoid macrophage
- paracortex (syn: subcortical zone, interfollicular area of the lymph node)
- reticular cell
- T Lymphocyte (syn: T cell)

**Note:** the classification schema for “bronchial blood vessel” is as follows:
- The classification scheme for the “bronchial artery” is the same as for the “pulmonary muscular artery” below
- The classification scheme for the “bronchial arteriole” is the same as for the “pulmonary distal arteriole” below
- The classification scheme for the “bronchial venule” is the same as for the “pulmonary vein” (does not include the “vasa vasorum”) below
- The classification scheme for the “bronchial artery” is the same as for the “pulmonary distal venule” below
pulmonary arteriole

pulmonary muscular arteriole

vascular connective tissue (syn: perivascular connective tissue)

connective tissue cell

smooth muscle cell

subendothelial connective tissue cell

vascular endothelium

arteriole endothelium

basement membrane

vascular endothelial cell

subendothelial connective tissue cell

vascular connective tissue (syn: perivascular connective tissue)

connective tissue cell

vascular smooth muscle

smooth muscle cell

unclassified fibroblast

proteoglycan

glycosaminoglycan

glycoprotein

proteoglycan

glycosaminoglycan

glycoprotein

glycosaminoglycan

glycoprotein

proteoglycan

glycosaminoglycan

glycoprotein

proteoglycan

glycosaminoglycan

glycoprotein

proteoglycan

glycosaminoglycan

glycoprotein
pulmonary distal arteriole

pulmonary distal arteriole tunica intima
pulmonary distal arteriole tunica media
pulmonary distal arteriole tunica adventitia
vascular smooth muscle
smooth muscle cell
vascular connective tissue (syn: perivascular connective tissue)
connective tissue cell
telocyte
unclassified fibroblast
extracellular matrix
collagen fiber
elastic fiber
ground substance
glycosaminoglycan
glycoprotein
proteoglycan
reticular fiber
pulmonary distal arteriole tunica media
pulmonary distal arteriole tunica adventitia
vascular connective tissue (syn: perivascular connective tissue)
connective tissue cell
telocyte
unclassified fibroblast
extracellular matrix
collagen fiber
elastic fiber
ground substance
glycosaminoglycan
glycoprotein
proteoglycan
reticular fiber
pulmonary vein
pulmonary vein tunica intima
subendothelial connective tissue cell
pericyte
telecyte
vein endothelium
basement membrane
venous endothelial cell
vascular connective tissue (syn: perivascular connective tissue)
connective tissue cell
telecyte
unclassified fibroblast
extracellular matrix
collagen fiber
elastic fiber
ground substance
glycosaminoglycan
glycoprotein
proteoglycan
reticular fiber
pulmonary vein tunica media
vascular vein tunica media
smooth muscle cell
venous cardiac muscle
cardiomyocyte (syn: cardiac myocyte)
vascular connective tissue (syn: perivascular connective tissue)
connective tissue cell
telecyte
unclassified fibroblast
extracellular matrix
collagen fiber
elastic fiber
ground substance
glycosaminoglycan
glycoprotein
proteoglycan
reticular fiber
pulmonary vein tunica adventitia
vasa vasorum
vascular connective tissue (syn: perivascular connective tissue)
connective tissue cell
telecyte
unclassified fibroblast
extracellular matrix
collagen fiber
elastic fiber
ground substance
glycosaminoglycan
glycoprotein
proteoglycan
reticular fiber
pulmonary venule
pulmonary muscular venule
Pulmonary muscular venule tunica intima

Venule endothelium

Basement membrane

Pulmonary muscular venule tunica media

Pulmonary muscular venule tunica adventitia

Pulmonary distal venule
lung lymphatic vessel