



Upload image

Aug 16, 2020

605.2 URMHC HTC Human Lung BioSpecimen Ontology framework 081520

Gloria S Pryhuber¹, Jennifer Dutra¹, Jeanne Holden-Wiltse¹

¹University of Rochester Medical Center

1 Works for me dx.doi.org/10.17504/protocols.io.bi9hkh36

LungMap2 Consortium URMHC Pryhuber Lab



Gloria Pryhuber
University of Rochester Medical Center

DOI

dx.doi.org/10.17504/protocols.io.bi9hkh36

DOCUMENT CITATION

Gloria S Pryhuber, Jennifer Dutra, Jeanne Holden-Wiltse 2020. 605.2 URMHC HTC Human Lung BioSpecimen Ontology framework 081520. **protocols.io**
<https://dx.doi.org/10.17504/protocols.io.bi9hkh36>

LICENSE

————— This is an open access document distributed under the terms of the [Creative Commons Attribution License](https://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited

CREATED

Aug 02, 2020

LAST MODIFIED

Aug 16, 2020

DOCUMENT INTEGER ID

39945

LungMap HTC BRINDL Human Lung Biospecimen Inventory Ontology Framework

Sample primary derivative

Sample secondary derivative

Additive/Fixation

Sub-additive/Embedding

I - **Organism:** Homo sapiens

I I - **Sex:** Male/Female

I I I - **Life Stage:** (age or stage (fetal (up to 42 weeks gestation, neonatal up to 30 days, infant >30 days <= 1 yr, child >1yr <=11 years, adolescent >11yrs <=20 yrs, young adult >20yrs))

I I I I - **Tissue Status/Diagnosis:** (Healthy, Diseased)

I I I I I - **Primary Tissue/Sample Type:**

Left Upper Lung (LUL)

Left Lower Lung (LLL)

Right Upper Lung (RUL)

Right Middle Lung (RML)

Right Lower Lung (RLL)

Combined Lung Lobes (CBL)

Trachea, Unspecified (TRA)

Trachea Proximal, divided to left and right (TLP and TRP)

Trachea Distal, divided to left and right (TLD and TRD)
 Bronchus Left (BRL) – extra pulmonary
 Bronchus Right (BRR) – extra pulmonary
 Lymph node, Paratracheal (LNT)
 Lymph node, Hilar (LNH)
 Thymus (THY)
 Nerve (NRV)
 Esophagus (ESO)
 Extra pulmonary Vessel non-specific (VSL)
 ||||| - Extra Pulmonary vein (VPV)
 ||||| - Extra Pulmonary artery (VPA)
 Spleen (SPL)
 Blood (BLD)

||||| **Sectioned Tissue:**

OCT-PBS inflated frozen (OCTI) (* "OCT" may be other similar material, such as a methylcellulose)

||||| - tissue slice (SLC)
 ||||| - tissue strip (STR)
 ||||| - tissue block (BLK)
 OCT (OCT) Embedded
 ||||| - tissue block (BLD)
 ||||| - tissue slide (SLD)
 ||||| - slide with H & E stain (H&E)

Flash Frozen, without inflation (FFr)

||||| - tissue biopsy (BPS)
 ||||| - tissue slice (SLC)
 ||||| - tissue strip (STR)
 ||||| - tissue block (BLK)
 ||||| - FFb (OCT) embedded
 ||||| - FFb (CMC) embedded
 ||||| - FFb Non-embedded
 ||||| - Extracted RNA (XPA)
 ||||| - cDNA made from RNA (CDN)
 ||||| - Protein Lysate (PTN)
 ||||| - tissue slide (SLD)
 ||||| - slide with H & E stain (H&E)

Fresh Tissue, air inflated without fixation (FSHAI)

||| - lobe (LUL, etc)
 ||||| - tissue slice (SLC)
 ||||| - tissue strip (STR)
 ||||| - tissue block (BLK)
 ||||| - Extracted RNA (XPA)
 ||||| - cDNA made from RNA (CDN)
 ||||| - Protein Lysate (PTN)
 ||||| - tissue slide (SLD)
 ||||| - slide with H & E stain (H&E)

4% PFA Sucrose Frozen (PFAS)

OCT (OCT)
 ||||| - tissue slice (SLC)
 ||||| - tissue strip (STR)
 ||||| - tissue block (BLK)
 ||||| - slide with H & E stain (H&E)

10% Formalin inflated (FFI)

||||| - tissue slice (SLC)

||||| |- tissue strip (STR)
||||| |- tissue block (BLK)
70% Ethanol (EtOH)
||||| |- tissue slice (SLC)
||||| |- tissue strip (STR)
||||| |- tissue block (BLK)
Paraffin (PAR)
||||| |- tissue block (BLK)
||||| |- tissue slide (SLD)
||||| |- slide with H & E stain (H&E)

10% Formalin (FF)
||||| |- tissue slice (SLC)
||||| |- tissue strip (STR)
||||| |- tissue block (BLK)
70% Ethanol (EtOH)
||||| |- tissue slice (SLC)
||||| |- tissue strip (STR)
||||| |- tissue block (BLK)
Paraffin (PAR)
||||| |- tissue block (BLK)
||||| |- tissue slide (SLD)
||||| |- slide with H & E stain (H&E)

4% PFA inflated (PFAI)
||||| |- tissue slice (SLC)
||||| |- tissue strip (STR)
||||| |- tissue block (BLK)
OCT (OCT)
||||| |- tissue slice (SLC)
||||| |- tissue strip (STR)
||||| |- tissue block (BLK)
||||| |- slide with H & E stain (H&E)

4% PFA inflated sucrose (PFAIS)
||||| |- tissue slice (SLC)
||||| |- tissue strip (STR)
||||| |- tissue block (BLK)
OCT (OCT)
||||| |- tissue slice (SLC)
||||| |- tissue strip (STR)
||||| |- tissue block (BLK)
||||| |- slide with H & E stain (H&E)

Agarose inflated (AGAI)
||||| |- tissue slice (SLC)
||||| |- tissue strip (STR)
||||| |- tissue block (BLK)
||||| |- Flash Frozen (FFr)
||||| |- 10% Formalin (FORM)
||||| |- 70% Ethanol (EtOH)
||||| |- Paraffin (PAR)
||||| |- tissue slide (SLD)
||||| |- slide with H & E stain (H&E)
||||| |- 4% PFA Sucrose Frozen (PFAS)
||||| |- OCT Embedded (OCT)
||||| |- tissue slide (SLD)

||||||| slide with H & E stain (H&E)
||||||| CMC Embedded (CMC)
||||||| tissue slide (SLD)
||||||| slide with H & E stain (H&E)

||||| **Dissociated Tissue Cells:** (by enzymatic digestion with 1) Collagenase/Dnase I (C) or 2) Collagenase/Dnase I/Dispase II (CD) or 3) Collagenase/Dnase I /Dispasell/ Elastase (CDE))

FBS DMSO (subadditive)

Possible sub-additives 1) Ammonium Bicarbonate or 2) Phosphatase Inhibitor cocktail

||||| Mixed lung tissue originating cells (MIX)

||||| Mixed/unfractionated bone marrow derived immune cells (MIC): 7AAD+/singlets/CD45+

||||| CD4+ T cells (CD4): 7AAD-/singlets/CD14-/CD235a-/CD3+/CD4+/CD8-

||||| CD8+ T cells (CD8): 7AAD-/singlets/CD14-/CD235a-/CD3+/CD4-/CD8+

||||| B cells (BCL): 7AAD-/CD14-/singlets/CD235a-/CD3-/CD19+/CD56-

||||| NK cells (NKC): 7AAD-/singlets/CD14-/CD235a-/CD3-/CD19-/CD56+

||||| Macrophages (MCL): 7AAD-/singlets/CD235a-/CD14+

||||| Epithelial cells (EPI) CD235a-/ 7-AAD-/CD45-/EpCAM+

||||| Type I epithelial cells (EP1) CD235a-/ 7-AAD-/CD45-/VE-Cadherin-/PECAM-/EpCam+/T1alpha+

||||| Mixture Type II and airway epithelial cells (EP2) CD235a-/ 7-AAD-/CD45-/VE-Cadherin-/PECAM-/EpCam+/T1alpha-

||||| Endothelial cells (END): CD235a-/ 7-AAD-/CD45-/VE-Cadherin+/PECAM+

||||| Lymphatic cells (LYM): CD235a-/ 7-AAD-/CD45-/VE-Cadherin-/PECAM-/EpCam-/T1alpha+

||||| Mesenchymal cells unspecified (MES): CD235a-/ 7-AAD-/CD45-/VE-Cadherin-/PECAM-/EpCam-/T1alpha-

||||| Mesenchymal fibroblast cells (MFI): CD235a-/ 7-AAD-/CD45-/VE-Cadherin-/PECAM-/EpCam-/T1alpha-/CD105-

||||| Mesenchymal stromal cells (MSC): CD235a-/ 7-AAD-/CD45-/VE-Cadherin-/PECAM-/EpCam-/T1alpha-CD105+/CD90+

||||| Dissociated Tissue Cells Sub-derivatives: (following derivatives can be made from above dissociated cell populations):

||||| Cytospin slide (SLS)

||||| Extracted RNA (XPA)

||||| cDNA made from RNA (CDN)

||||| Protein taken from lysed cell pellet (PTN)

||||| CD105+ (CD105)

||||| Primary Sample Blood (BLD)

Heparin (HEP) or double dose of heparin (DHP)

||||| Serum (SER)

||||| Plasma (PL1)

||||| PBMC (CEL)

||||| CD45+ mixed/unfractionated immune cells (MIC): 7AAD+/singlets/CD45+

||||| CD4+ T cells (CD4): 7AAD-/singlets/CD14-/CD235a-/CD3+/CD4+/CD8-

||||| CD8+ T cells (CD8): 7AAD-/singlets/CD14-/CD235a-/CD3+/CD4-/CD8+

||||| B cells (BCL): 7AAD-/CD14-/singlets/CD235a-/CD3-/CD19+/CD56-

||||| NK cells (NKC): 7AAD-/singlets/CD14-/CD235a-/CD3-/CD19-/CD56+

||||| Macrophages (MCL): 7AAD-/singlets/CD235a-/CD14+

||||| Nucleic Extraction Sub-derivatives: (following derivatives can be made from above PBMC cell populations):

||||| Extracted DNA (XDA)

||||| Extracted RNA (XPA)

||||| Extracted total nucleic acid (XTN)

||||| Extracted pellet from DNA PCR for sequencing (XPD)

||||| Extracted pellet from RNA RT PCR for sequencing (XPR)

||||| Extracted pellet fluid from RNA RT PCR for sequencing (XFL)

||||| cDNA made from RNA (CDN)

||||| Protein taken from lysed cell pellet (PTN)