Adult LacZ IMPC_ALZ_001

Purpose

To stain adult mutant and control tissues for bacterial beta-galactosidase (LacZ) activity in order to assess the adult organ, tissue, substructure and cell type of gene expression of IKMC alleles utilizing a LacZ reporter.

Description: Adult mouse tissues are scored for presence of LacZ staining which is distinct from either nonspecific staining observed in wildtype control mice, or is too faint to score as present. Intensity of staining is not required but can be reported. Anatomical terms to localize staining to the organ, structure, substructure, or cell type will use standard mouse anatomy ontology terms.

Experimental Design

Mutants:

- **Minimum number of animals :** 1M or1F heterozygote
- Age will depend upon the logistics of each center, but all mice will be within 7 days of the age stipulated in the center-specific protocols, and all mice will be > 50 days of age;
- The tissues in the agreed parameter list will be stained and annotated for each mutant

Controls:

- A minimum of one control mouse will be stained and annotated for every 10 mutants
- The tissues in the agreed parameter list will be stained and annotated for each control

Procedure

Center-specific methods will be provided and be on file and linked to the data for each mutant line.

For each mouse, for each tissue, the scoring system will be: + (specific staining), - (no staining), NS (non-specific staining), or NA (tissue not available)

Where positive, specific, staining is found:

A. A representative image will be taken and uploaded for each mutant line. The image will have a sizing reference bar and optional center-specific watermark embedded into the image.

B. The metadata collected for each mouse will be associated with the image.

C. Each image will have a substructure field for additional annotation provided by that center.

Notes

Tables of results for each tissue from each HET or HOM mouse scored for: presence /absence/non-specific/tissue not-available as defined above.

Representative images for positive staining tissues.

Additional annotation to provide anatomical substructure & cell specificity.

Database of non-specific staining and presentation of images representative of non-specific staining.

Data QC

Quality control for each center's processes and annotation will be established by that center' s staff and published as part of their detailed protocol.

A database of control non-specific staining will be maintained by the Data Coordination Center and updated periodically to indicate the frequency of non-specific staining found in wildtype mice by each center. Representative images of non-specific staining will be linked to the data for each mutant line.

Parameters and Metadata

Lymph Node IMPC_ALZ_008_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: imageOnly, ambiguous, no expression, tissue not available, expression,

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Ileum IMPC_ALZ_047_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: ambiguous, tissue not available, expression, imageOnly, no expression,

Thymus IMPC_ALZ_015_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: no expression, imageOnly, tissue not available, ambiguous, expression,

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Parathyroid gland IMPC_ALZ_060_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: tissue not available, ambiguous, expression, no expression, imageOnly,

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Colorspace IMPC_ALZ_094_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

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Experimental category IMPC_ALZ_095_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

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Kidney IMPC_ALZ_006_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: tissue not available, no expression, imageOnly, ambiguous, expression,

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Pixels per millimeter after processing IMPC_ALZ_098_001 | v1.1

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

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Prostate gland IMPC_ALZ_029_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: tissue not available, ambiguous, imageOnly, expression, no expression,

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Testis IMPC_ALZ_014_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: tissue not available, expression, imageOnly, no expression, ambiguous,

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Cerebellum IMPC_ALZ_034_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: ambiguous, tissue not available, expression, imageOnly, no expression,

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Illumination source manufacturer IMPC_ALZ_089_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

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Microscope equipment id IMPC_ALZ_080_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

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Tongue IMPC_ALZ_069_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: no expression, ambiguous, tissue not available, expression, imageOnly,

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Gonadal fat pad IMPC_ALZ_049_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: no expression, expression, ambiguous, tissue not available, imageOnly,

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Ovary IMPC_ALZ_010_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: ambiguous, tissue not available, expression, no expression, imageOnly,

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Mesenteric Lymph Node IMPC_ALZ_073_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: imageOnly, ambiguous, no expression, expression, tissue not available,

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Harderian Gland IMPC_ALZ_057_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: tissue not available, expression, no expression, ambiguous, imageOnly,

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Illumination source model IMPC_ALZ_090_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

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Large Intestine IMPC_ALZ_018_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: ambiguous, imageOnly, tissue not available, no expression, expression,

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Orientation IMPC_ALZ_096_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

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Free Ontology Annotation reason IMPC_ALZ_078_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

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Bit Depth IMPC_ALZ_093_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

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Pixels per millimeter before processing IMPC_ALZ_097_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

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Hindlimb IMPC_ALZ_058_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: tissue not available, imageOnly, ambiguous, expression, no expression,

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Eye IMPC_ALZ_004_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: ambiguous, no expression, tissue not available, imageOnly, expression,

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Olfactory Lobe IMPC_ALZ_037_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: tissue not available, ambiguous, expression, imageOnly, no expression,

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Sciatic nerve IMPC_ALZ_065_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: expression, no expression, ambiguous, tissue not available, imageOnly,

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Spleen IMPC_ALZ_030_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: imageOnly, no expression, ambiguous, tissue not available, expression,

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White Adipose Tissue IMPC_ALZ_025_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: tissue not available, ambiguous, no expression, expression, imageOnly,

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Brain IMPC_ALZ_003_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: no expression, ambiguous, expression, imageOnly, tissue not available,

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Objective equipment company IMPC_ALZ_086_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

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Trachea IMPC_ALZ_016_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: expression, no expression, ambiguous, imageOnly, tissue not available,

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Lower Urinary Tract IMPC_ALZ_002_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: imageOnly, ambiguous, expression, no expression, tissue not available,

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Gall Bladder IMPC_ALZ_056_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: expression, ambiguous, no expression, tissue not available, imageOnly,

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Date Microscope last calibrated IMPC_ALZ_083_001 | v1.1

procedureMetadata

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

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Bone IMPC_ALZ_043_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: ambiguous, expression, no expression, imageOnly, tissue not available,

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Epididymis IMPC_ALZ_102_001 | v1.2

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: ambiguous, tissue not available, expression, imageOnly, no expression,

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Uterus IMPC_ALZ_017_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: expression, no expression, ambiguous, imageOnly, tissue not available,

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Vesicular Gland IMPC_ALZ_072_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: ambiguous, expression, no expression, imageOnly, tissue not available,

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Sample preparation stain name IMPC_ALZ_091_001 | v1.1

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

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Cranium IMPC_ALZ_066_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: expression, tissue not available, no expression, imageOnly, ambiguous,

Hippocampus IMPC_ALZ_035_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: imageOnly, ambiguous, expression, tissue not available, no expression,

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Colon IMPC_ALZ_045_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: no expression, expression, imageOnly, tissue not available, ambiguous,

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Heart IMPC_ALZ_005_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: imageOnly, expression, tissue not available, no expression, ambiguous,

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Date of Perfusion IMPC_ALZ_101_001 | v1.2

procedureMetadata

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

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Midbrain IMPC_ALZ_104_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: imageOnly, ambiguous, expression, no expression, tissue not available,

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Aorta IMPC_ALZ_027_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: no expression, imageOnly, expression, tissue not available, ambiguous,

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Bone Marrow IMPC_ALZ_050_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: ambiguous, tissue not available, imageOnly, expression, no expression,

Penis IMPC_ALZ_062_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: ambiguous, no expression, imageOnly, tissue not available, expression,

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Mesenteric adipose tissue IMPC_ALZ_053_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: imageOnly, expression, ambiguous, tissue not available, no expression,

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Oral epithelium IMPC_ALZ_074_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: expression, imageOnly, tissue not available, ambiguous, no expression,

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Date of Sacrifice IMPC_ALZ_100_001 | v1.1

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

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Pituitary gland IMPC_ALZ_022_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: no expression, tissue not available, imageOnly, expression, ambiguous,

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Microscope equipment model IMPC_ALZ_082_001 | v1.1

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

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Vascular System IMPC_ALZ_041_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: tissue not available, no expression, expression, imageOnly, ambiguous,

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Showcase image IMPC_ALZ_099_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

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Microscope equipment manufacturer IMPC_ALZ_081_001 | v1.1

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

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Skeletal Muscle IMPC_ALZ_023_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: tissue not available, ambiguous, imageOnly, no expression, expression,

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Cartilage tissue IMPC_ALZ_032_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: expression, no expression, imageOnly, ambiguous, tissue not available,

Stomach IMPC_ALZ_013_001 | v1.2

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: no expression, tissue not available, imageOnly, ambiguous, expression,

Skin IMPC_ALZ_012_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: ambiguous, expression, tissue not available, no expression, imageOnly,

Striatum IMPC_ALZ_040_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: ambiguous, no expression, expression, tissue not available, imageOnly,

Lung IMPC_ALZ_026_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: tissue not available, no expression, expression, ambiguous, imageOnly,

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Blood IMPC_ALZ_054_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: ambiguous, tissue not available, imageOnly, no expression, expression,

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Chest bone IMPC_ALZ_064_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: ambiguous, imageOnly, no expression, expression, tissue not available,

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Peripheral Nervous System IMPC_ALZ_038_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: tissue not available, imageOnly, ambiguous, no expression, expression,

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Pancreas IMPC_ALZ_028_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: imageOnly, no expression, ambiguous, expression, tissue not available,

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LacZ Images Section IMPC_ALZ_075_001 | v1.1

seriesMediaParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

Increments: Minimum 1

Oviduct IMPC_ALZ_011_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: imageOnly, no expression, ambiguous, tissue not available, expression,

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Liver IMPC_ALZ_007_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: no expression, imageOnly, tissue not available, expression, ambiguous,

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Free Ontology IMPC_ALZ_077_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

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Vagina IMPC_ALZ_071_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: tissue not available, no expression, expression, imageOnly, ambiguous,

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Detector equipment model IMPC_ALZ_085_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

Peyers Patch IMPC_ALZ_039_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: ambiguous, tissue not available, imageOnly, expression, no expression,

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Trigeminal V nerve IMPC_ALZ_070_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: expression, ambiguous, imageOnly, no expression, tissue not available,

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Parotid gland IMPC_ALZ_061_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: tissue not available, ambiguous, imageOnly, expression, no expression,

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Objective equipment model IMPC_ALZ_087_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

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Sublingual Gland IMPC_ALZ_067_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: expression, tissue not available, ambiguous, no expression, imageOnly,

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Submandibular Gland IMPC_ALZ_068_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: expression, ambiguous, no expression, imageOnly, tissue not available,

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Urinary bladder IMPC_ALZ_042_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: ambiguous, imageOnly, tissue not available, expression, no expression,

Objective magnification IMPC_ALZ_088_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

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LacZ Images Wholemount IMPC_ALZ_076_001 | v1.1

seriesMediaParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

Increments: Minimum 1

Sample preparation reference impc IMPC_ALZ_092_001 | v1.1

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

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Stomach pyloric region IMPC_ALZ_063_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: imageOnly, no expression, ambiguous, expression, tissue not available,

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Quadriceps IMPC_ALZ_059_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: ambiguous, expression, no expression, tissue not available, imageOnly,

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Cecum IMPC_ALZ_044_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: imageOnly, no expression, ambiguous, tissue not available, expression,

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Duodenum IMPC_ALZ_046_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: imageOnly, no expression, expression, tissue not available, ambiguous,

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Brown adipose tissue IMPC_ALZ_052_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: expression, no expression, ambiguous, tissue not available, imageOnly,

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Brainstem IMPC_ALZ_031_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: expression, imageOnly, ambiguous, tissue not available, no expression,

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Thalamus IMPC_ALZ_105_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: tissue not available, ambiguous, expression, imageOnly, no expression,

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Diaphragm IMPC_ALZ_055_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: no expression, ambiguous, tissue not available, expression, imageOnly,

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Esophagus IMPC_ALZ_019_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: imageOnly, no expression, tissue not available, ambiguous, expression,

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Mammary gland IMPC_ALZ_009_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: tissue not available, expression, imageOnly, no expression, ambiguous,

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Thyroid gland IMPC_ALZ_021_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: ambiguous, expression, tissue not available, no expression, imageOnly,

Hypothalamus IMPC_ALZ_036_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: tissue not available, expression, ambiguous, no expression, imageOnly,

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Vas Deferens IMPC_ALZ_051_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: expression, tissue not available, imageOnly, ambiguous, no expression,

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Cerebral Cortex IMPC_ALZ_033_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: no expression, tissue not available, expression, imageOnly, ambiguous,

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Main olfactory bulb IMPC_ALZ_103_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: imageOnly, no expression, tissue not available, expression, ambiguous,

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Adrenal gland IMPC_ALZ_001_001 | v1.2

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: ambiguous, imageOnly, no expression, expression, tissue not available,

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Free text comment IMPC_ALZ_079_001 | v1.1

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

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Detector equipment manufacturer IMPC_ALZ_084_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

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Small Intestine IMPC_ALZ_024_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: ambiguous, no expression, tissue not available, expression, imageOnly,

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Spinal cord IMPC_ALZ_020_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** true

Options: tissue not available, no expression, imageOnly, ambiguous, expression,

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Jejunum IMPC_ALZ_048_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** true

Options: expression, no expression, tissue not available, ambiguous, imageOnly,

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