\*Title: Adult LacZ

\*Centre: IMPC

\*Date\_modified: 20-12-2012

\*Last\_modified\_by:

\*Version: 1

{Sections:}

## \*1. 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.

## \*2. Experimental Design

Mutants:

* A minimum of two adult animals per mutant line will be stained and annotated
* 1M and 1F will be stained and annotated for each mutant line
* HET mutants will be stained and annotated. If HOM animals are stained and annotated, then they will be in addition to the 1M and 1F HET required
* 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

## \*3. Equipment

## \*4. 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.

## \*5. 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.

## \*6 . Measured Parameters - list

{Placed in Parameters spreadsheet}

## \*7. MetaData Parameters - list

{Placed in Parameters spreadsheet}