

CMHD Pathology Report



CMHD Pathology Core

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ReportID: 2011

Pathologist: H. Adissu

Report Date: November 23,

Mouse Genetics Project

Wellcome Trust Sanger Institute Wellcome Trust Genome Campus Hinxton, Cambridge CB10 1SA UK

CMHD LabID: N11-186

Relevant History:

(Body Weight Curves; Indirect Calorimetry; Body Composition (DEXA); Micronuclei)

AnimalID: M00359667 Rad18 hom

Tissue Preservation and Staining:

Thyroid gland is not present in section. Tissues not present in submission: Calvarium, ears, tongue, Harderian gland, zymbal gland, nasal sinuses, teeth, gall bladder.

Organ/Tissue Analyzed:

There were no significant findings in the following tissues: Calvarium, brain, eyes, ears, tongue, Harderian gland, zymbal gland, salivary glands, nasal sinuses, teeth, trachea, lungs, heart, thymus, thyroid gland, parathyroid gland, spleen, liver, gall bladder, exocrine and endocrine pancreas, esophagus, stomach, intestines, urinary organs and tract, reproductive organs and tracts, adrenal gland, lymph nodes, spinal cord, bones, bone marrow, skeletal muscles, brown fat, and skin.

Summary:

Hepatic lipidosis not observed.

AnimalID: M00359668 Rad18 hom

Tissue Preservation and Staining:

Thyroid gland is not present in the section. There is artifactual separation of the dermis and hypodermis. Tissues not present in submission: Calvarium, ears, tongue, Harderian gland, zymbal gland, nasal sinuses, teeth, gall bladder.

Histopathology Findings:

kidney (MA:0000368)

Histopath Description:

There is a focal aggregate of lymphocytes and histiocytes within the interstitium of the renal pelvis.

Morphological Diagnosis:

Duration: Chronic; Distribution: Focal; Severity: mild; MPATH Diagnosis: inflammation MPATH:212

Definitive Diagnosis:

Mononuclear inflammatory aggregate

Organ/Tissue Analyzed:

There were no significant findings in the following tissues: Calvarium, brain, eyes, ears, tongue, Harderian gland, zymbal gland, salivary glands, nasal sinuses, teeth, trachea, lungs, heart, thymus, thyroid gland, parathyroid gland, spleen, liver, gall bladder, exocrine and endocrine pancreas, esophagus, stomach, intestines, adrenal gland, reproductive organs, lymph nodes, spinal cord, bones, bone marrow, skeletal muscles, brown fat, and skin.

Summary:

hepatic lipidosis is not observed.

AnimalID: M00244680 Rad18 hom

Tissue Preservation and Staining:

Thyroid gland is not present in the section. There is artifactual separation of the dermis and hypodermis. Tissues not present in submission: Calvarium, ears, tongue, Harderian gland, zymbal gland, nasal sinuses, teeth, gall bladder.

Histopathology Findings:

lung (MA:0000415)

Histopath Description:

There is a focal perivascular aggregate of lymphocytes and histiocytes.

Morphological Diagnosis:

Duration: Chronic; **Distribution:** Focal; **Severity:** mild; **MPATH Diagnosis:** inflammation MPATH:212

Definitive Diagnosis:

Perivascular lymphocyte and histiocyte aggregate

adrenal gland (MA:0000116)

Histopath Description:

Adrenal cortical cells immediately surrounding the medulla are vacuolated and contain fine granular golden brown cytoplasmic pigment. Rare mononuclear cells are present within this zone.

Morphological Diagnosis:

Distribution: Diffuse; Severity: no lesions; MPATH Diagnosis: degenerative change MPATH:14

Definitive Diagnosis:

Vacuolar degeneration of X-zone of the adenal gland with cytoplasmic ceroid accumulation (X-zone involution).

Histopathology Comments:

The X zone of the adrenal cortex disappears when males reach sexual maturity and females undergo their first pregnancy. The zone also disappears in virgin females, albeit graduall (Percy and Barthold, 2007).

lymph node (MA:0000139)

Histopath Description:

The mesenteric lymph node is enlarged (greater than three-fold). There are multiple follicles with large germinal centers. The sinuses contain large numbers of mature lymphocytes.

Morphological Diagnosis:

Duration: Sub-acute; **Distribution:** Diffuse; **Severity:** moderate; **MPATH Diagnosis:**

hyperplasia MPATH:134

Definitive Diagnosis:

Lymphoid hyperplasia.

Histopathology Comments:

The changes in the mesenteric lymph node are suggestive of draining of a regional inflammatory process. However, such a process was not observed in the tissues examined.

liver (MA:0000358)

Histopath Description:

The overall hepatic lobular architecture is normal. Diffusely, hepatocytes contain intracytoplasmic clear vacuoles (lipid). The lipid vacuoles within the midzonal and periacinar regions are small (2-3 um in diameter) and surround a central nucleus (interpreted as microvesicular lipid). The lipid vacuoles within the portal areas are large (8-12 um in diameter) and displace the nucleus to the margin (macrovesicular lipid). There are rare perivascular mononuclear inflammatory cells.

Morphological Diagnosis:

Distribution: Diffuse; Severity: moderate; MPATH Diagnosis: lipid deposition MPATH:42

Definitive Diagnosis:

Hepatic lipidosis

Histopathology Comments:

Hepatocellular vacuolar change of variable degree suggestive of lipidosis is present in all mice from WTSI, consistent with high lipid diet.

Tissue Preservation and Staining:

Thyroid gland is not present in the section. There is artifactual separation of the dermis and hypodermis. Tissues not present in submission: Calvarium, ears, tongue, Harderian gland, zymbal gland, nasal sinuses, teeth, gall bladder.

Histopathology Findings:

lymph node (MA:0000139)

Histopath Description:

The mesenteric lymph node is enlarged (greater than three-fold). There are multiple follicles with large germinal centers. The sinuses contain large numbers of mature lymphocytes.

Morphological Diagnosis:

Duration: Sub-acute; **Distribution:** Diffuse; **Severity:** moderate; **MPATH Diagnosis:** hyperplasia MPATH:134

Definitive Diagnosis:

Lymphoid hyperplasia.

Histopathology Comments:

The changes in the mesenteric lymph node are suggestive of draining of a regional inflammatory process. However, such a process was not observed in the tissues examined.

liver (MA:0000358)

Histopath Description:

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Morphological Diagnosis:

Distribution: Diffuse; Severity: moderate; MPATH Diagnosis: lipid deposition MPATH:42

Definitive Diagnosis:

Hepatic lipidosis

Histopathology Comments:

Hepatocellular vacuolar change of variable degree suggestive of lipidosis is present in all mice from WTSI, consistent with high lipid diet.

Summary:

Lesion observed in this line are considered incidental.

Report Summary and Recommendation:

Hepatic lipidosis not observed.

Liver: Lipid depletion - MPATH: 52