



CMHD Pathology Report



CMHD Pathology Core

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Mouse Genetics Project

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CMHD LabID: N11-190

Relevant History:

Low hemoglobin and hematocrit observed notably in the females. (Haematology (CBC); Citrobacter Challenge) Decreased Hg and Hct, increased susceptibility to infection

AnimalID: M00393052 Stard13 hom

Tissue Preservation and Staining:

There is artifactual separation of the dermis and hypodermis. The thyroid gland is not present in section. 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:

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.

brain (MA:0000168)

Histopath Description:

There is a mild enlargement of the lateral ventricle.

Morphological Diagnosis:

Severity: mild; **MPATH Diagnosis:** hydrocephalus MPATH:639

Definitive Diagnosis:

hydrocephalus, lateral ventricle

Histopathology Comments:

Variable degree of hydrocephalus is observed in a proportion of wild type C57 Black 6 mice.

Organ/Tissue Analyzed:

NSF will be appended

AnimalID: M00393053 Stard13 hom

Tissue Preservation and Staining:

There is artifactual separation of the dermis and hypodermis. The thyroid gland is not present in section. 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:

The overall hepatic lobular architecture is normal. Nearly 50% of hepatocytes notably within the midzonal region contain large (8-12 um in diameter) intracytoplasmic clear vacuoles (macrovesicular lipid). Rare small clusters of lymphocytes are present.

Morphological Diagnosis:

Distribution: Multifocal; **Severity:** mild; **MPATH Diagnosis:** lipid deposition MPATH:42

Definitive Diagnosis:

Hepatic lipidosis; multifocal inflammatory foci

Histopathology Comments:

Hepatocellular vacuolar change of variable degree suggestive of lipidosis is present in all mice from WT51, consistent with high lipid diet. The changes in this mouse are less severe.

brain (MA:0000168)

Histopath Description:

There is a mild enlargement of the lateral ventricle.

Morphological Diagnosis:

Severity: mild; **MPATH Diagnosis:** hydrocephalus MPATH:639

Definitive Diagnosis:

hydrocephalus, lateral ventricle

Histopathology Comments:

Variable degree of hydrocephalus is observed in a proportion of wild type C57 Black 6 mice.

stomach (MA:0000353)

Histopath Description:

Multifocally, glandular epithelial cells contain abundant hyalinized eosinophilic proteinaceous material.

Morphological Diagnosis:

Distribution: Multifocal; **Severity:** mild; **MPATH Diagnosis:** protein deposition MPATH:45

Definitive Diagnosis:

Gastric epithelial proteinosis

eye (MA:0000261)**Histopath Description:**

There is a focally extensive folding of the retina at the posterior margin; the ganglion layer in this folded focus is adhered to the pigmented retinal epithelium.

Morphological Diagnosis:

Distribution: Focal; **MPATH Diagnosis:** developmental and structural abnormality MPATH:55

Definitive Diagnosis:

Focal retinal fold

Organ/Tissue Analyzed:

NSF will be appended

AnimalID: M00393048 Stard13 hom**Tissue Preservation and Staining:**

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

Histopathology Findings:**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.

Organ/Tissue Analyzed:

NSF will be appended

AnimalID: M00393049 Stard13 hom**Tissue Preservation and Staining:**

There is artifactual separation of the dermis and hypodermis. The thyroid gland is not present in section. 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 two-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.

Organ/Tissue Analyzed:

NSF will be appended

Summary:

Hyperplasia of mesenteric lymph nodes is present in 3 of the four mice in this line. Bone marrow will be reviewed separately and results will be appended.

Report Summary and Recommendation:

Lymph node hyperplasia was observed in 3 of 4 mice in this line. Although this lesion is not specific to this line, it may suggest a chronic antigenic stimulation or infection. We speculate a chronic disease or antigenic stimulation may have caused the decrease in hemoglobin and hematocrit observed during in-life phenotyping.

Lymph node: hyperplasia MPATH:134