

CMHD Pathology Report



CMHD Pathology Core

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ReportID: 2011

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

CMHD LabID: N11-191

AnimalID: M00249067 Acot6 hom

Tissue Preservation and Staining:

Thyroid gland is present in slide 2. 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. Approximately 5-10% of hepatocytes within the portal and midzone region contain large (8-12 um in diameter) intracytoplasmic clear vacuoles (macrovesicular lipid).

Morphological Diagnosis:

Distribution: Multifocal; Severity: mild; 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. The changes in this mouse are less severe.

liver (MA:0000358)

Histopath Description:

There are rare small aggregates of inflammatory cells.

Morphological Diagnosis:

Distribution: Multifocal; Severity: mild; MPATH Diagnosis: inflammation MPATH:212

Definitive Diagnosis:

Inflammatory cell aggregates

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.

spinal cord (MA:0000216)

Histopath Description:

occasional vacuoles (10-40 um in diameter) are present within the spinal cord, notably within the

white matter and at the white matter and grey matter junction. The vacuoles are similar to those observed in Mcph1 line (artefactual).

Morphological Diagnosis:

Distribution: Multifocal; Severity: mild;

Definitive Diagnosis:

Buscaino bodies or mucocytes.

Histopathology Comments:

This is considered a tissue processing artefact (see comment in summary)

Organ/Tissue Analyzed:

NSF will be appended

AnimalID: M00249072 Acot6 hom

Tissue Preservation and Staining:

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. Approximately 5-up to 5% of hepatocytes within the portal and midzone region contain large (8-12 um in diameter) intracytoplasmic clear vacuoles (macrovesicular lipid).

Morphological Diagnosis:

Distribution: Multifocal; Severity: mild; 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. 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.

spinal cord (MA:0000216)

Histopath Description:

Located within the leptomeninges and mildly compressing the dorsal spinal column is a 100 μm round keratin-filled cystic structure that is largely lined by a well-differentiated stratified squamous epithelium and by simple squamous epithelium that is devoid of basal layer at one margin The apical cells abutting the lumen contain cytoplasmic keratohylaine granules. There are few (up to 15) neutrophils at the stratified margin.

Morphological Diagnosis:

Distribution: Focal; Severity: mild; MPATH Diagnosis: dermoid cyst MPATH:311

Definitive Diagnosis:

Spinal leptomeningeal dermoid cyst (dermoid sinus)

Histopathology Comments:

Dermoid cyst is caused by defective epidermal closure along embryonic fissures isolating an island of ectoderm in the dermis or subcutis. Spinal leptomeningeal dermoid cyst has been described various inbred mouse strains (Stroop, 1984). Dermoid cysts have been associated with multiple vertebral and spinal malformations (Ginn et al., 2007). The cyst was small with minimal compression of the dorsal spinal column; hence considered insignificant.



Spinal cord, leptomeningial dermoid cyst, 20x,

spinal cord (MA:0000216)

Histopath Description:

Similar vacuoles as described in M00249067 are present.

Morphological Diagnosis:

Distribution: Multifocal; Severity: mild;

Definitive Diagnosis:

Buscaino bodies or mucocytes.

Histopathology Comments:

This is considered a tissue processing artefact (see comment in summary)

Organ/Tissue Analyzed:

NSF will be appended

AnimalID: M00249082 Acot6 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.

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. Approximately 5-10% of hepatocytes within the portal and midzone region contain large (8-12 um in diameter) intracytoplasmic clear vacuoles (macrovesicular lipid).

Morphological Diagnosis:

Distribution: Multifocal; Severity: mild; 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. The changes in this mouse are less severe.

liver (MA:0000358)

Histopath Description:

There are rare small aggregates of inflammatory cells.

Morphological Diagnosis:

Distribution: Multifocal; **Severity:** mild; **MPATH Diagnosis:** inflammation MPATH:212

Definitive Diagnosis:

Inflammatory cell aggregates

spinal cord (MA:0000216)

Histopath Description:

Similar vacuoles as described in M00249067 are present.

Morphological Diagnosis:

Distribution: Multifocal; Severity: mild;

Definitive Diagnosis:

Buscaino bodies or mucocytes.

Histopathology Comments:

This is considered a tissue processing artefact (see comment in summary)

Organ/Tissue Analyzed:

NSF will be appended

AnimalID: M00250965 Acot6 hom

Tissue Preservation and Staining:

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. Approximately 5-10% of hepatocytes within the portal and midzone region contain large (8-12 um in diameter) intracytoplasmic clear vacuoles (macrovesicular lipid).

Morphological Diagnosis:

Distribution: Multifocal; Severity: mild; 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. The changes in this mouse are less severe.

liver (MA:0000358)

Histopath Description:

There are rare small aggregates of inflammatory cells.

Morphological Diagnosis:

Distribution: Multifocal; Severity: mild; MPATH Diagnosis: inflammation MPATH:212

Definitive Diagnosis:

Inflammatory cell aggregates

salivary gland (MA:0000346)

Histopath Description:

There is a focal interstitial aggregate of histiocytes and lymphocytes.

Morphological Diagnosis:

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

Definitive Diagnosis:

Interstitial histiocytic and lymphocytic sialadenitis

Histopathology Comments:

This is a common and insignificant incidental finding in mice.

eye (MA:0000261)

Histopath Description:

One of the eyes is markedly hypoplastic (micropathalmic); it is composed of a cavity lined by a thick layer of pigmented structure (undeveloped choroid) surrounded by a thick collagenous capsule.

Morphological Diagnosis:

Distribution: Unilateral; **Severity:** extreme; **MPATH Diagnosis:** developmental and structural abnormality MPATH:55

Definitive Diagnosis:

Microphtalmia, unilateral

Histopathology Comments:

Microphtalmiaand other ocular defects are noted as incidental lesion in C57BL6/B6 mice.



Eye, microphtalmia, severe, 10x, HE.

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.

inguinal fat pad (MA:0002548)

Histopath Description:

Adjacent to a piece of a skeletal muscle, there is a focally extensive necrosis of fat that is partially and extensively surrounded by a thick layer of degenerate and rare viable neutrophils. The edge of the muscle is also mildly infiltrated by neutrophils.

Morphological Diagnosis:

Duration: Acute; **Distribution:** Focal; **Severity:** moderate; **MPATH Diagnosis:** steatitis

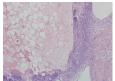
MPATH:636

Definitive Diagnosis:

Panniculitis, necrosuppurative

Histopathology Comments:

The lesion was likely caused by trauma (fighting injury).



Inguinal fat pad, steatitis, 10x, HE.

spinal cord (MA:0000216)

Histopath Description:

Similar vacuoles as described in M00249067 are present.

Morphological Diagnosis:

Distribution: Multifocal; Severity: mild;

Definitive Diagnosis:

Buscaino bodies or mucocytes.

Histopathology Comments:

This is considered a tissue processing artefact (see comment in summary)

Organ/Tissue Analyzed:

NSF will be appended

Summary:

Incidental and lesions attributable to background strain are noted in this line.

Report Summary and Recommendation:

Incidental and lesions attributable to background strain are noted in this line.

References:

1. Ginn PE et al. The skin and appendages. In: Pathology of Domestic Animals, ed. Grant M., 5th ed., Vol. 1. pp. 592-593. Saunders-Elsevier, New York, NY, 2007 2. Stroop WG (1984). Spinal leptomeningeal epidermoid cysts in inbred mouse strains. Acta Neuropathol. 4:301-5.