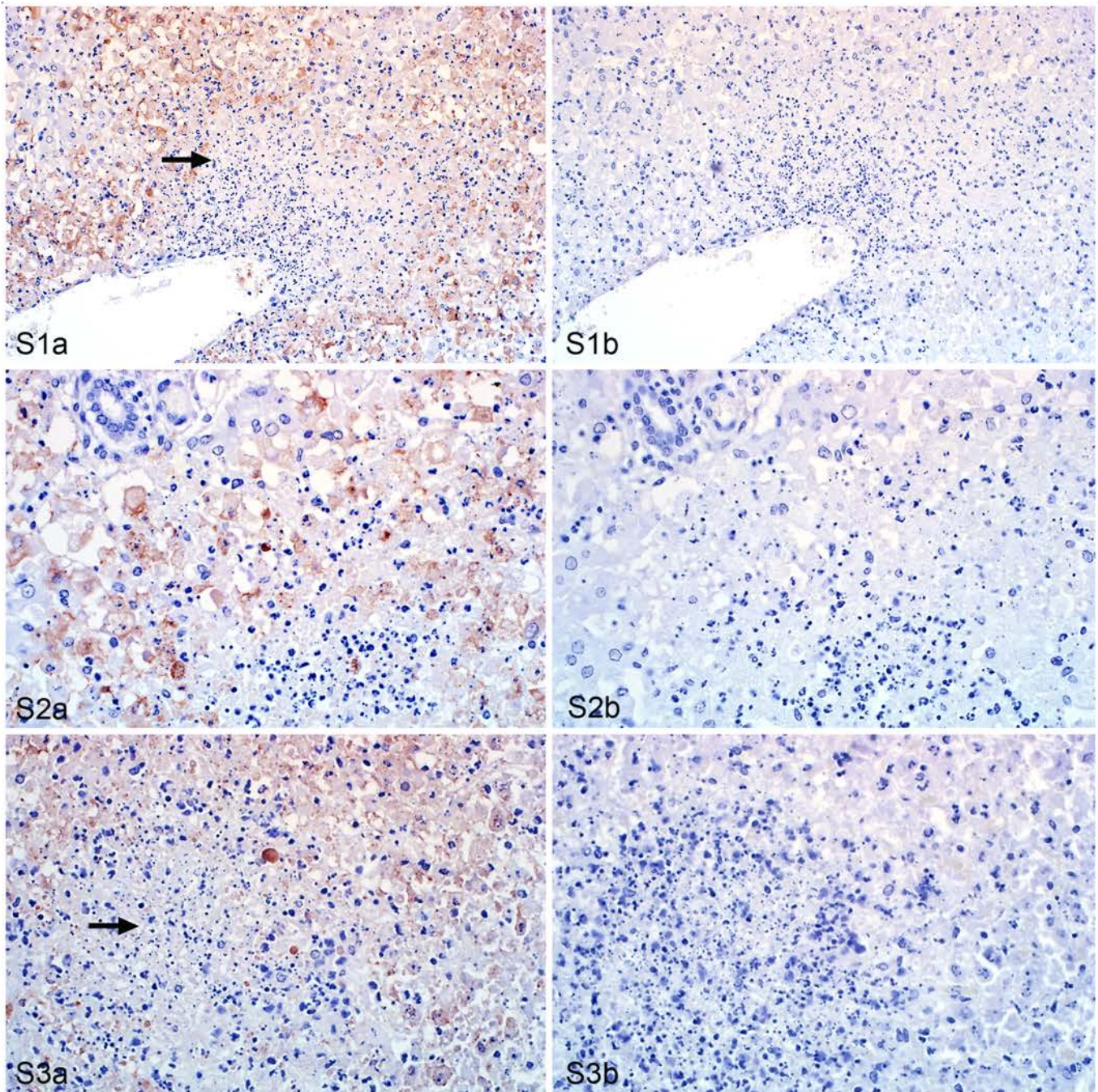


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Lesions and cellular tropism of natural Rift Valley fever virus infection in young lambs
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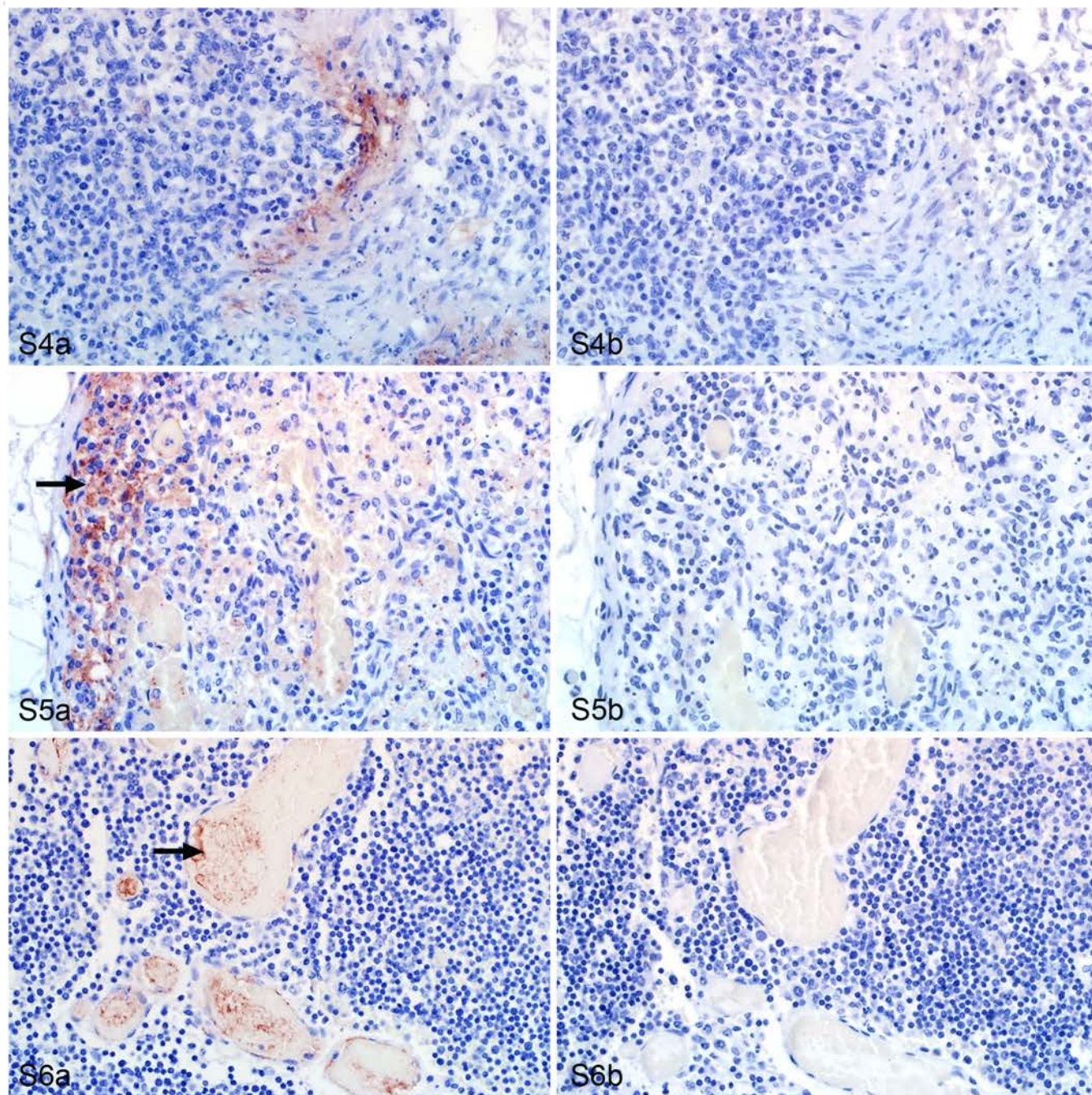
Supplemental figures S1-S3. Rift Valley fever virus (RVFV), liver, young lambs. Sequential testing of tissue sections with antibodies to Rift Valley fever virus and Wesselsbron virus (WBV).

Figure S1a. Case 3. Sparse viral antigen in a primary focus (arrow) adjacent to the central vein, accompanied by intense labeling in the surrounding liver parenchyma. Immunohistochemistry (IHC) for RVFV. **Figure S1b.** Case 3 sequential slide. Negative for viral antigen. IHC for WBV. **Figure S2a.** Case 54. RVFV antigen in the cytoplasm of necrotic hepatocytes adjacent to a portal canal. IHC for RVFV. **Figure S2b.** Case 54 sequential slide. Negative for viral antigen. IHC for WBV. **Figure S3a.** Case 32. Labeling in the cytoplasm of necrotic hepatocytes and sparse labeling in a midzonal primary focus (arrow). IHC for RVFV. **Figure S3b.** Case 32 sequential slide. Negative for viral antigen. IHC for WBV.

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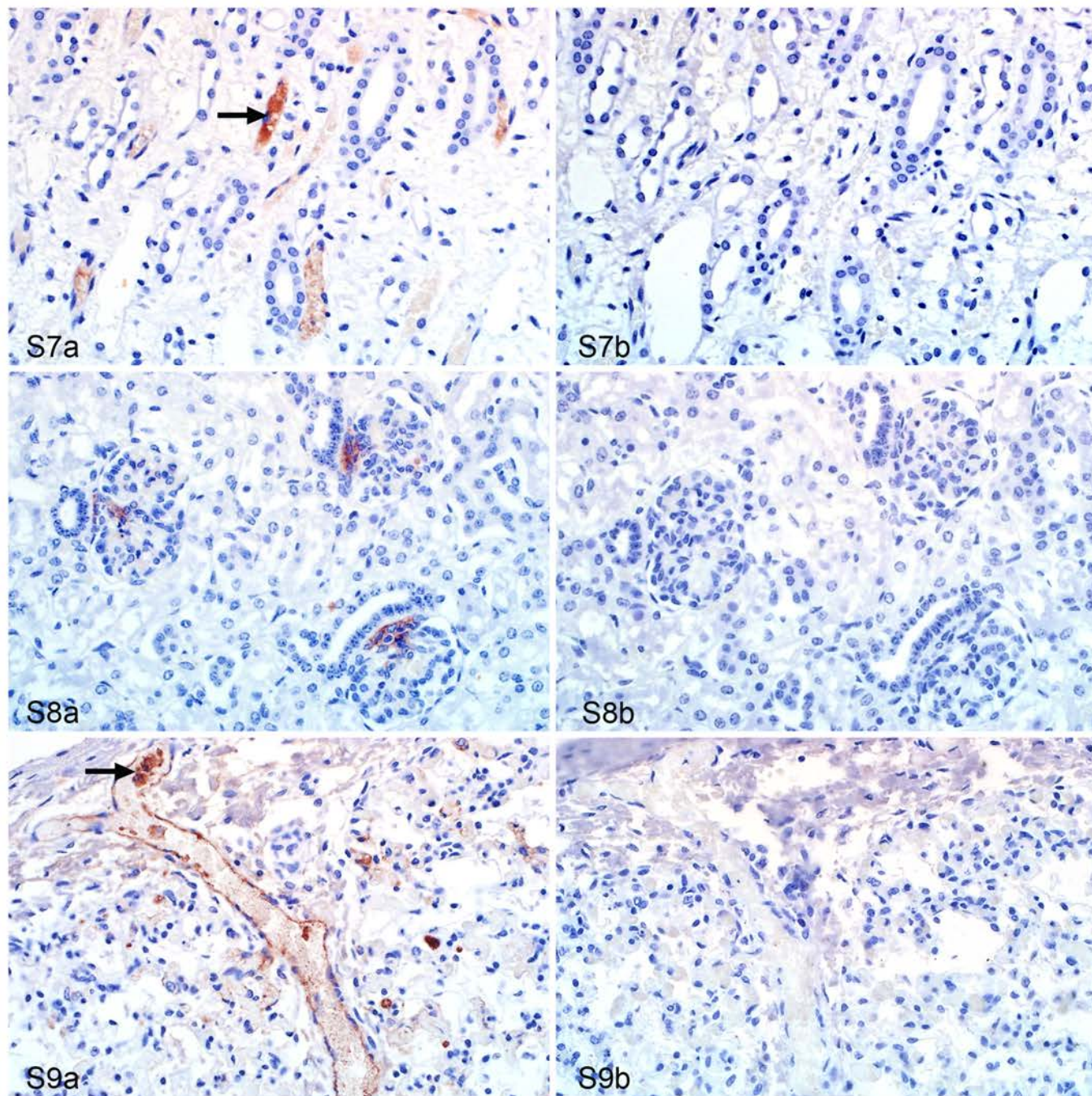
Supplemental figures S4-S6. Rift Valley fever virus (RVFV), spleen, lymph node and thymus, young lambs. Sequential testing of tissue sections with antibodies to Rift Valley fever virus and Wesselsbron virus (WBV).

Figure S4a. Case 56. Spleen. RVFV antigen in the capsule. Immunohistochemistry (IHC) for RVFV. **Figure S4b.** Case 56 sequential slide. Spleen. Negative for viral antigen. IHC for WBV. **Figure S5a.** Case 33. Lymph node. Prominent viral antigen in the subcapsular sinus (arrow). Also, widespread labeling in the superficial cortex. IHC for RVFV. **Figure S5b.** Case 33 sequential slide. Lymph node. Negative for viral antigen. IHC for WBV. **Figure S6a.** Case 33. Thymus. Non-cell associated viral antigen in interstitial blood vessels (arrow) and RVFV antigen in endothelial cells. IHC for RVFV. **Figure S6b.** Case 33 sequential slide. Thymus. Negative for viral antigen. IHC for WBV.

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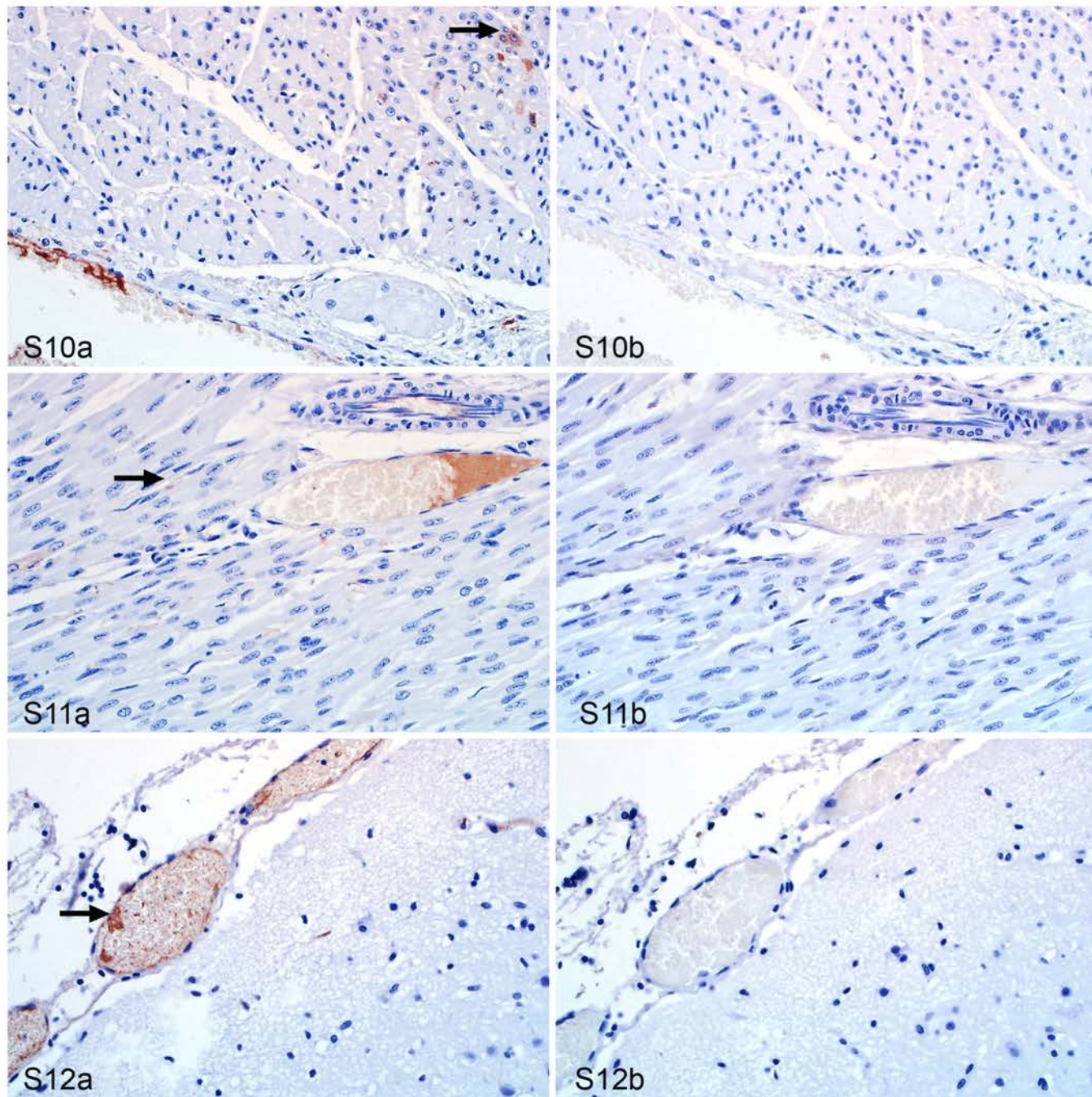
Supplemental figures S7-S9. Rift Valley fever virus (RVFV), kidney and lung, young lambs. Sequential testing of tissue sections with antibodies to Rift Valley fever virus and Wesselsbron virus (WBV).

Figure S7a. Case 17. Kidney. Non-cell associated viral antigen in interstitial blood vessels in the medulla (arrow). Immunohistochemistry (IHC) for RVFV. **Figure S7b.** Case 17 sequential slide. Kidney. Negative for viral antigen. IHC for WBV. **Figure S8a.** Case 57. Kidney. RVFV antigen opposite the macula densa in juxtaglomerular cells and extraglomerular mesangial cells in the glomeruli. IHC for RVFV. **Figure S8b.** Case 57 sequential slide. Kidney. Negative for viral antigen. IHC for WBV. **Figure S9a.** Case 33. Lung. Non-cell associated viral antigen in an interstitial blood vessel (arrow) and RVFV antigen in endothelial cells and intravascular cell fragments. Also, widespread viral antigen in the pulmonary interstitium. IHC for RVFV. **Figure S9b.** Case 33 sequential slide. Lung. Negative for viral antigen. IHC for WBV.

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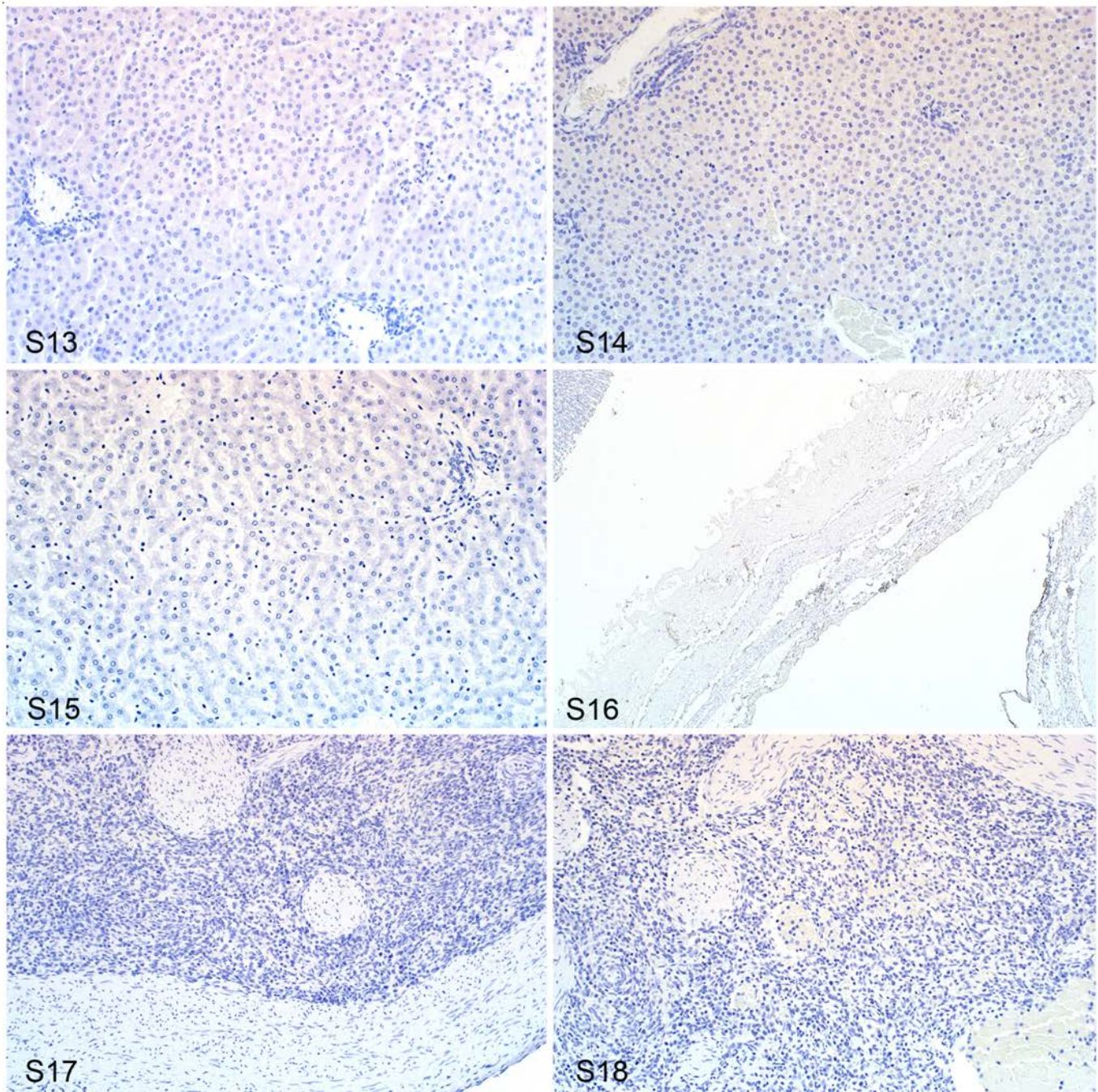


Supplemental figures S10-S12. Rift Valley fever virus (RVFV), heart and cerebrum, young lambs. Sequential testing of tissue sections with antibodies to Rift Valley fever virus and Wesselsbron virus (WBV).

Figure S10a. Case 39. Heart. RVFV antigen in scattered cardiomyocytes (arrow). Also, non-cell associated viral antigen in a blood vessel and in endothelial cells. Immunohistochemistry (IHC) for RVFV. **Figure S10b.** Case 39 sequential slide. Heart. Negative for viral antigen. IHC for WBV. **Figure S11a.** Case 39. Heart. Non-cell associated viral antigen in a blood vessel and labeling in interstitial capillaries (arrow). IHC for RVFV. **Figure S11b.** Case 39 sequential slide. Heart. Negative for viral antigen. IHC for WBV. **Figure S12a.** Case 30. Cerebral cortex. Non-cell associated viral antigen in a vein in the pia mater (arrow) and RVFV antigen in endothelial cells. Also, labeling in capillaries in the substance of the cerebral cortex. IHC for RVFV. **Figure S12b.** Case 30 sequential slide. Cerebral cortex. Negative for viral antigen. IHC for WBV.

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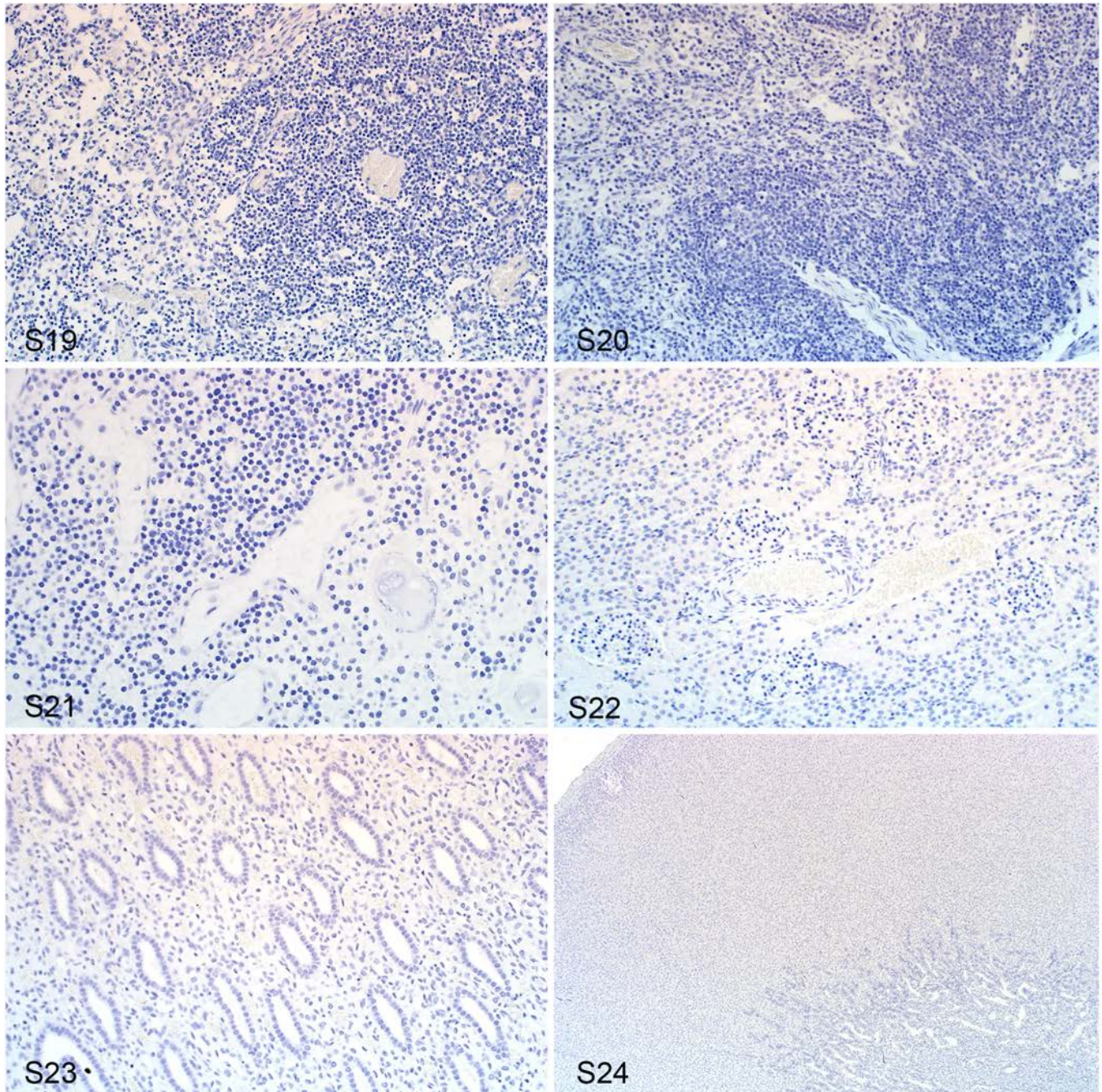


Supplemental figures S13-S18. Negative controls (non-infected, age-matched), liver and spleen, young lambs. Immunohistochemistry for Rift Valley fever virus.

Figure S13. Control 4. Liver. Parenchyma and blood vessels negative for viral antigen. **Figure S14.** Control 9. Liver. Negative for viral antigen. **Figure S15.** Control 12. Liver. Negative for viral antigen. **Figure S16.** Control 1. Gall bladder. Negative for viral antigen. **Figure S17.** Control 12. Spleen. Capsule and subcapsular red pulp. Negative for viral antigen. **Figure S18.** Control 1. Spleen. Red and white pulp with large blood vessels and trabeculae negative for viral antigen.

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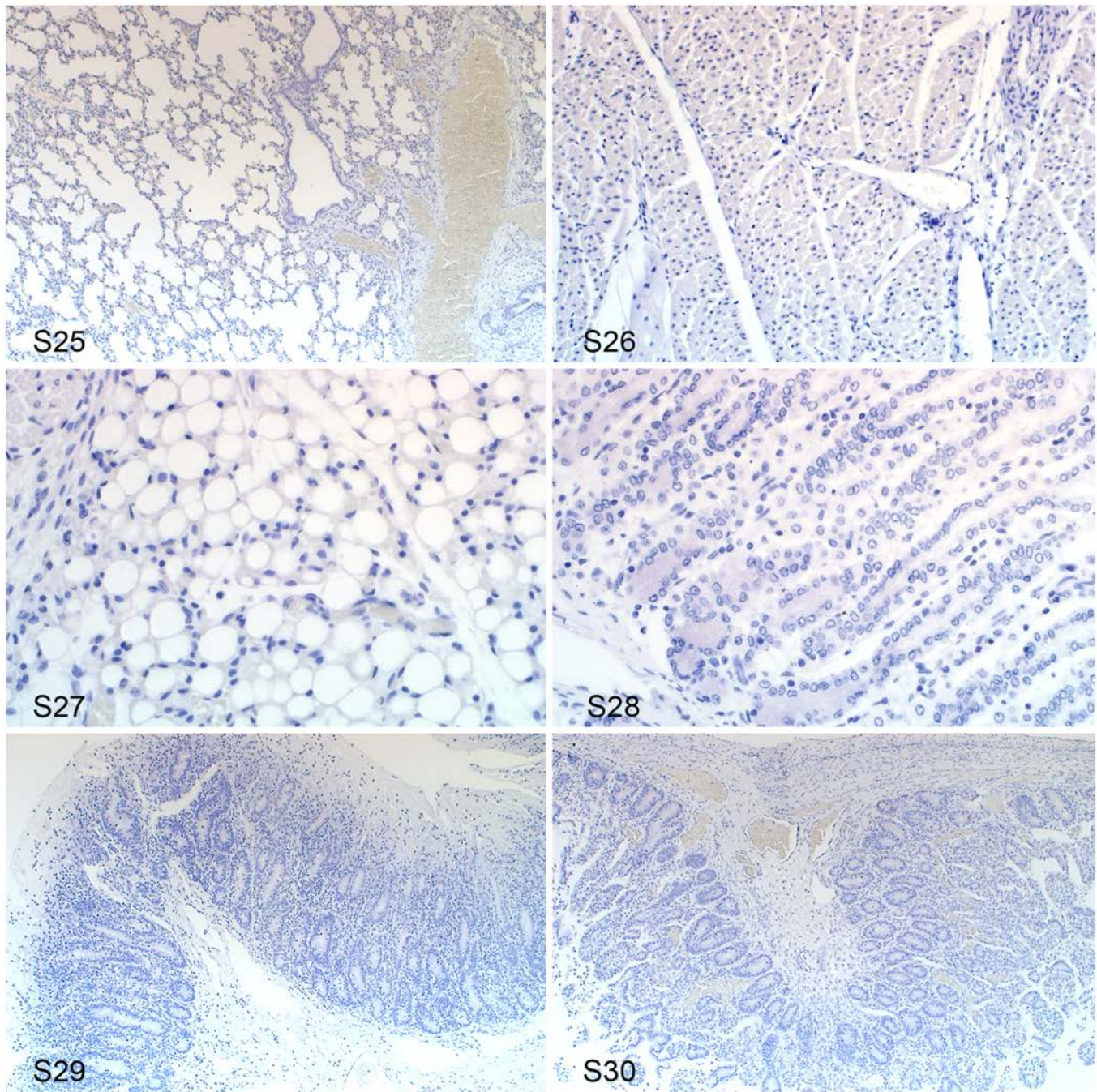
Supplemental figures S19-S24. Negative controls (non-infected, age-matched), lymph node, thymus, kidney and adrenal, young lambs. Immunohistochemistry for Rift Valley fever virus.

Figure S19. Control 4. Lymph node. Cortex and medulla negative for viral antigen. **Figure S20.** Control 9. Lymph node. Capsule, cortex and medulla negative for viral antigen. **Figure S21.** Control 2. Thymus. Negative for viral antigen. **Figure S22.** Control 6. Kidney. Cortex negative for viral antigen. **Figure S23.** Control 9. Kidney. Medulla negative for viral antigen. **Figure S24.** Control 1. Adrenal. Capsule and cortex negative for viral antigen.

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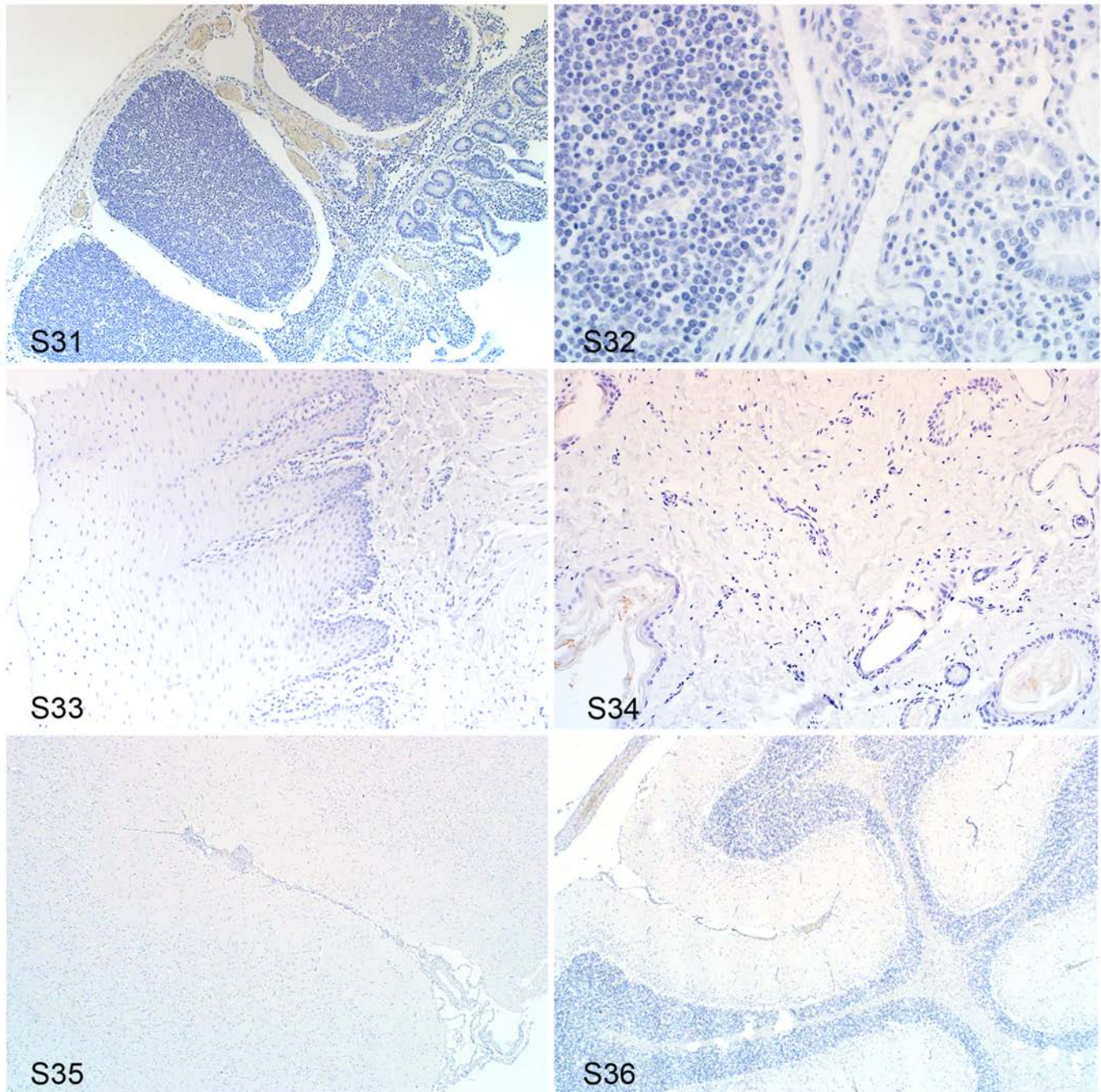


Supplemental figures S25-S30. Negative controls (non-infected, age-matched), lung, heart, abomasum and small intestine, young lambs. Immunohistochemistry for Rift Valley fever virus.

Figure S25. Control 9. Lung. Negative for viral antigen. **Figure S26.** Control 3. Heart. Myocardium with blood vessels and Purkinje fibres negative for viral antigen. **Figure S27.** Control 13. Pericardial fat. Negative for viral antigen. **Figure S28.** Control 4. Abomasum. Negative for viral antigen. **Figure S29.** Control 1. Small intestine. Negative for viral antigen. **Figure S30.** Control 8. Small intestine. Negative for viral antigen.

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Supplemental S31-36. Negative controls (non-infected, age-matched), ileum, tongue, skin cerebrum and cerebellum, young lambs. Immunohistochemistry for Rift Valley fever virus.

Figure S31. Control 8. Ileum. Peyer's patches, blood vessels and layers of the ileum negative for viral antigen. **Figure S32.** Control 12. Ileum. Edge of a Peyer's patch and mucosa negative for viral antigen. **Figure S33.** Control 1. Tongue. Epithelium and underlining tissues negative for viral antigen. **Figure S34.** Control 1. Skin. All structures in the epidermis and dermis negative for viral antigen. **Figure S35.** Control 13. Cerebrum. Cortex negative for viral antigen. **Figure S36.** Control 13. Cerebellum. Negative for viral antigen.