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Testing performed at the above address only

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS Tissue samples, predominantly from the central nervous system,. (Excludes any CNS samples taken for forensic examination)	Neuropathology examinations to assist in clinical investigations	Documented in house procedures in conjunction with manufacturer's instructions for: Dissection NP-LAB-SOP-003 Decalcification NP-LAB-SOP-003 Tissue Processing Thermo Scientific Excelsior AS (biopsy processing) Thermo Scientific Excelsior ES (Post mortem processing) in conjunction with in house documented methods: NP-LAB-SOP-004 Embedding Embedding centre TES99 Medite medizintechnik Microtomy Rotary Microtome – Leica RM2235 and Base Sledge Microtome – Leica SM2400 NP-LAB-SOP-005

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Neuropathology examinations to assist in clinical investigations (cont'd)	Documented in house procedures in conjunction with manufacturer's instructions for:
Formalin Fixed Paraffin Embedded Tissue (FFPE) sections on glass slides	Special tinctorial staining for the demonstration of:	Histochemical Staining using Manual Techniques
	Basophilic and eosinophilic structure	Haematoxylin and Eosin NP-LAB-SOP-042
	Collagen	Haematoxylin Van Gieson NP-LAB-SOP-047
	Connective tissue (reticulin fibres)	Reticulin stain NP-LAB-SOP-044
	Mucopolysaccharides and elastic fibres	Alcian Blue Verhoef's Van Gieson NP-LAB-SOP-063
	Mucins – acid and neutral	Alcian Blue/PAS NP-LAB-SOP-033
	Elastic fibres and mast cell granules	Elastic Van Gieson NP-LAB-SOP-046
	Neurofibrillary tangles and plaques	Gallyas method for neurofibrillary changes NP-LAB-SOP-055
	Gram positive and Gram negative organisms	Gram Twort NP-LAB-SOP-036
	Myelin, nissl substance, glial cells	Luxol fast blue/Cresyl violet NP-LAB-SOP-037
	Melanin	Masson Fontana NP-LAB-SOP-056
	Muscle, bone, hyaline casts, erythrocytes, fibrin, collagen	Mauritius Scarlet Blue NP-LAB-SOP-038
	Muscle, rbc, fibrin, collagen	Masson Trichrome NP-LAB-SOP-051
	Acidophils, basophils, chromophobes	Orange Fuchsin Green NP-LAB-SOP-052

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Neuropathology examinations to assist in clinical investigations (cont'd)	Documented in house procedures in conjunction with manufacturer's instructions for:
Formalin Fixed Paraffin Embedded Tissue (FFPE) sections on glass slides (cont'd)	Special tinctorial staining for the demonstration of:	Histochemical Staining using Manual Techniques
	Nerve fibres	Palmgren's method NP-LAB-SOP-053
	Fungi, some bacteria, cerebrosides and sphingomyelin, sialomucins and neutral mucins, glycogen, starch, elastin, reticulin, some lipofuscins	Periodic Acid Schiff and Periodic Acid Schiff/Diastase NP-LAB-SOP-035 & NP-LAB-SOP-034
	Ferric iron	Perl's Prussian blue NP-LAB-SOP-039
	Astrocytes, myelin, collagen, reticulin	Phosphotungstic acid haematoxylin (PTAH) NP-LAB-SOP-048
	Myelin sheaths	Solochrome Cyanine NP-LAB-SOP-040
	Amyloid, elastic fibres	Sirius Red NP-LAB-SOP-049
	Fungi	Tome method NP-LAB-SOP-045
	Acid fast bacilli	Ziehl-Neelsen (ZN) NP-LAB-SOP-041
Tissue samples, predominantly from the central nervous system on FFPE slides (Formalin fixed paraffin embedded)	Immunohistochemistry of Histopathology samples of neurological origin to demonstrate the following:	Documented in house procedures in conjunction with manufacturer's instructions for: Immunocytochemistry Automated using Ventana Benchmark Ultra NP-LAB-SOP-007 incorporating the following antibodies:
	Corticotrophs in adenohypophysis	Adrenocorticotrophic Hormone
	Lewy Body and Neuropil Marker.	Alpha synuclein

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd) Tissue samples, predominantly from the central nervous system on FFPE slides (Formalin fixed paraffin embedded) (cont'd)	<u>Neuropathology examinations to assist in clinical investigations</u> (cont'd) Immunohistochemistry of Histopathology samples of neurological origin to demonstrate the following:	Documented in house procedures in conjunction with manufacturer's instructions for: Immunocytochemistry Automated using Ventana Benchmark Ultra NP-LAB-SOP-007 incorporating the following antibodies:
	AT8 Clone of TAU	AT8(PHF-TAU AT8)
	Anaplastic oligo and anaplastic astrocytomas	ATRX
	Atypical teratoid/rhabdoid tumours.	BAF 47
	10 amino acid sequence from amyloid beta protein.	Beta amyloid protein 4G8
	Labels senile plaques, extraneuronal tangles	Beta amyloid precursor protein
	Marker for Adamantinomatous craniopharyngioma	Beta Catenin
	Reacts with cytokeratin 52 kDa (Moll #8) & weakly with cytokeratin 43 kDa (Moll #7). Not Moll #18	CAM 5.2
	T cells	CD3
	Plasma cells	CD138
	B-Cell Marker	CD20 (L26)
	Endothelial cell marker.	CD31
	Endotheilial cells of blood vessels.	CD34 (endothelial cell)
	Germinoma marker	CD117
	Pan T/B cell marker	CD45 (Leucocyte common ab)
	Monocytes and macrophages	CD68 (macrophage KP1)
	Neuroendocrine marker for tumours	Chromogranin A
	54kD cytokeratin.	Cytokeratin 7

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	<u>Neuropathology examinations to assist in clinical investigations</u> (cont'd)	Documented in house procedures in conjunction with manufacturer's instructions for: Immunocytochemistry Automated using Ventana Benchmark Ultra NP-LAB-SOP-007 incorporating the following antibodies:
Tissue samples, predominantly from the central nervous system on FFPE slides (Formalin fixed paraffin embedded) (cont'd)	Immunohistochemistry of Histopathology samples of neurological origin to demonstrate the following:	
	46kD intermediate filament protein.	Cytokeratin 20
	Rhabdomyosarcoma, leiomyoma, leiomyosarcoma and mesothelliomas. Desminopathies in muscle	Desmin
	Epithelia marker (secretory). Clone E29	Epithelial membrane antigen
	Anti-human epidermal growth factor receptor ab clone H9B4	Human EGFR pan
	Beta sub-unit of FSH,	Follicle stimulating hormone
	Astrocytes and some ependymal cells	Glial fibrillary acidic protein
	Somatotroph cells	Growth hormone
	Histone H3 with K27M mutation	Histone H3, K27M mutant
	Melanosome/Melanoma	HMB45 (melanoma)
	Herpes Simplex Virus 1	Herpes Simplex Virus 1
	Herpes Simplex Virus 2	Herpes Simplex Virus 2
	Placenta trophoblasts, hydatiform mole, choriocarcinoma.	Human chorionic gonadotrophin
	Astrocytoma and oligodendroglioma tumour cell marker	IDH1 R132H
	Cytokeratin proteins 5, 6 and 18	LP34
	Lamda +ve plasma cells	Lamda light chains
	Gonadotrophic cells of pituitary	Luteinising hormone

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd) Tissue samples, predominantly from the central nervous system on FFPE slides (Formalin fixed paraffin embedded) (cont'd)	<u>Neuropathology examinations to assist in clinical investigations</u> (cont'd) Immunohistochemistry of Histopathology samples of neurological origin to demonstrate the following: Ki-67. Labels proliferating cells, Myelin Proteolipid Protein For Type I fibres Alpha-actin and filaments. Myotilinopathology. Neuronal specific nuclear protein- Antibody to phosphorylated and unphosphorylated neurofilament, 200 & 70 KDA (Phosphorylated) Neurones and neuroendocrine system. Oligodendroglioma marker, nuclear staining. Tumour suppressor gene Multimeric signal protein Pituitary hormone Prostate secretory & ductal Glial & epenymal cells, & Schwann cells of PNS Simian Vacuolating Virus 40 Neurons & neuroendocrine cells.	Documented in house procedures in conjunction with manufacturer's instructions for: Immunocytochemistry Automated using Ventana Benchmark Ultra NP-LAB-SOP-007 incorporating the following antibodies: MIB1 Myelin PLP Myosin slow (Type I) Myotilin Neu N Neurofilament (Zymed) Neurofilament (Phos Dako) Neuron specific enolase Oligodendrocyte transcription factor-2 P53 P62 Prolactin Prostate specific antigen S100 Simian Vacuolating Virus 40 Synaptophysin

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	<u>Neuropathology examinations to assist in clinical investigations</u> (cont'd)	Documented in house procedures in conjunction with manufacturer's instructions for: Immunocytochemistry Automated using Ventana Benchmark Ultra NP-LAB-SOP-007 incorporating the following antibodies:
Tissue samples, predominantly from the central nervous system on FFPE slides (Formalin fixed paraffin embedded) (cont'd)	Immunohistochemistry of Histopathology samples of neurological origin to demonstrate the following:	
	Ubiquitin-positive and tau-negative inclusions	TDP-53
	Beta sub-unit of TSH & thyrotropic cells	Thyroid stimulating hormone
	Toxoplasma Gondii	Toxoplasma Gondii
	Mesenchymal origin.	Vimentin
	Varicellar Zoster Virus	Varicella Zoster Virus
Cerebrospinal Fluid fixed on glass slides	Cytological investigation of Cerebrospinal Fluid (CSF) to detect cellular abnormalities to assist in clinical investigations	Documented in house procedures in conjunction with manufacturer's instructions for: Specimen Preparation NP/LAB/SOP/011 Cantel Medical SP Class I Thermo Scientific Cytospin 4 Staining NP/LAB/SOP/011 Microscope – Nikon Y-THS Manual Immunohistochemistry using Vectastain Elite ABC and Biogenex Polymer HRP NP-LAB-SOP-007 NP-LAB-MET-010 NP-LAB-MET-015
	Detection of:	Incorporating the following antibodies:
	Reacts with cytokeratin 52 kDa (Moll #8) & weakly with cytokeratin 43 kDa (Moll #7). Not Moll #18	CAM 5.2
	Plasma cells	CD138

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Neuropathology examinations to assist in clinical investigations (cont'd)	Documented in house procedures in conjunction with manufacturer's instructions for: Specimen Preparation NP/LAB/SOP/011 Cantel Medical SP Class I Thermo Scientific Cytospin 4 Staining NP/LAB/SOP/011 Microscope – Nikon Y-THS Manual Immunohistochemistry using Vectastain Elite ABC and Biogenex Polymer HRP NP-LAB-SOP-007 NP-LAB-MET-010 NP-LAB-MET-015
Cerebrospinal Fluid fixed on glass slides (cont'd)	Cytological investigation of Cerebrospinal Fluid (CSF) to detect cellular abnormalities to assist in clinical investigations (cont'd)	
	Detection of: (cont'd)	Incorporating the following antibodies:
	B-Cell marker	CD20 (L26)
	Endotheilial cells of blood vessels.	CD34 (endothelial cell)
	Pan T/B cell marker	CD45 (leucocyte common ab)
	Monocytes and macrophages	CD68 (macrophage KP1)
	Epithelia marker (secretory) Clone E29	Epithelial Membrane Antigen
	Astrocytes and some ependymal cells	Glial Fibrillary Acidic Protein
	Melanosome/melanoma	HMB45 (melanoma)
	Proliferating cells	MIB1 (Ki-67)
	Glial & epenymal cells, & Schwann cells of PNS	S100
	T cell marker	UCLH1

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Neuropathology examinations to assist in clinical investigations (cont'd)	Documented in house procedures in conjunction with manufacturer's instructions for: Specimen Preparation NP-LAB-SOP-013
Muscle biopsy on FFPE slides (Formalin fixed paraffin embedded)	Histological examination of muscle and nerve biopsy material to assist in clinical investigations	Tissue Processing: Thermo Scientific Excelsior AS (biopsy processing) Thermo Scientific Excelsior ES (Post mortem processing) NP-LAB-SOP-004 Embedding: Embedding centre TES99 Medite medizintechnik Microtomy: Rotary Microtome – Leica RM2235 Base Sledge Microtome – Leica SM2400 NP-LAB-SOP-005
	Demonstration of:	Histochemical Staining using Manual Techniques
	Basophilic and eosinophilic structures	Haematoxylin and Eosin NP-LAB-SOP-042
	Collagen	Haematoxylin Van Gieson NP-LAB-SOP-047
	Amyloid, elastic fibres	Sirius Red NP-LAB-SOP-049
		Immunocytochemistry Automated using Ventana Benchmark Ultra NP-LAB-SOP-007
		Clinical interpretation of stained slide: NP/MGT/SOP/004 NP/MGT/SOP/005 NP/MGT/SOP/007

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Neuropathology examinations to assist in clinical investigations (cont'd)	Documented in house procedures in conjunction with manufacturer's instructions for:
Muscle biopsy	Examination of frozen tissues in order to identify or exclude morphological and cytological abnormalities for the purpose of diagnosis	Specimen Preparation NP-LAB-SOP-013 Cryotomy NP-LAB-SOP-012 Cryostat – Leica CM3050S
	Demonstration of:	Histochemical Staining Using Manual Techniques
	Lysosomes	Acid Phosphatase Napthol AS-BI Phosphate NP-LAB-MET-055
	ATPase activity	ATPase NP-LAB-MET-061
	Cytochrome Oxidase activity	Cytochrome Oxidase activity NP-LAB-MET-062
	Mitochondrial myopathy	Cytochrome Oxidase/ Succinic Dehydrogenase NP-LAB-MET-063
	Mitochondria/ Ragged Red Fibres	Gomori Trichrome NP-LAB-MET-068
	Basophilic and eosinophilic structures	Haematoxylin and Eosin NP-LAB-MET-016
	Collagen	Haematoxylin Van Gieson NP-LAB-MET-065
	ATPase activity	Metachromatic ATPase NP-LAB-MET-071
	Myodenylate Deaminase activity	Myodenylate Deaminase NP-LAB-MET-058
	NADH-Tetrazolium activity	NADH-Tetrazoilum Reductase NP-LAB-MET-074

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Neuropathology examinations to assist in clinical investigations (cont'd)	In house documented methods and manufacturer's instructions
Muscle biopsy (cont'd)	Demonstration of: (cont'd)	Histochemical Staining Using Manual Techniques (cont'd)
	Lipids	Oil Red O NP-LAB-MET-075
	Glycogen	Periodic Acid Schiffs & Periodic Acid Schiffs/ Diastase NP-LAB-MET-078/64
	Phosphofructokinase activity	Phosphofructokinase NP-LAB-MET-091
	Phosphorylase activity	Phosphorylase NP-LAB-MET-080
	SDH activity	Succinic Dehydrogenase NP-LAB-MET-083
Muscle biopsy	Immunohistochemistry of histopathology samples of neurological origin to detect the following:	Manual immunohistochemistry using Vectastain Elite ABC and Biogenex Polymer HRP methods NP-LAB-SOP-007 NP-LAB-MET-010 NP-LAB-MET-015 Incorporating the following antibodies:
	Dystrophin associated glycoprotein	Alpha Dystroglycan
	Dystrophin	Beta Dystroglycan
	Inflammation in muscle	Beta 2 Microglobulin
	Neoepitope on poly C9 complement factor	C5b-9
	Membrane staining of muscle fibres.	Caveolin-3
	Plasma cells	CD138
	B-cell marker	CD20 (L26)

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Neuropathology examinations to assist in clinical investigations (cont'd)	In house documented methods and manufacturer's instructions
Muscle biopsy (cont'd)	Immunohistochemistry of histopathology samples of neurological origin to detect the following: (cont'd)	Manual immunohistochemistry (cont'd)
	Endotheilial cells of blood vessels.	CD34 (endothelial cell)
	Pan T/B cell marker	CD45 (leucocyte common ab)
	Monocytes and macrophages	CD68 (macrophage KP1)
	Smooth and striated muscle cells, mesothelial cells. Identification of desminomas, rhabdomyosarcomas, leiomyomas, and mesothelliomas.	Desmin
	Deficiency is associated with LMD 2B & Myoshi Myopathy	Dysferlin (Hamlet)
	Dystrophin in muscle fibre membranes	Dystrophin 1 (rod domain)
	Dystrophin in muscle fibre membranes	Dystrophin 2 (C terminus)
	Dystrophin in muscle fibre membranes	Dystrophin 3 (N or Amino terminus)
	X-linked emery	Emerin
	Reacts with the 300kD	Merosin (laminin alpha 2 chain)
	Labels proliferating cells	MIB1 (Ki67)
	For type II muscle fibres	Myosin fast
	For type I muscle fibres	Myosin slow
	Alpha-actin and filaments. Myotilinopathology.	Myotilin
	Antibody to phosphorylated and unphosphorylated neurofilament	Neurofilament (pan)

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Neuropathology examinations to assist in clinical investigations (cont'd)	In house documented methods and manufacturer's instructions
Muscle biopsy (cont'd)	Immunohistochemistry of histopathology samples of neurological origin to detect the following: (cont'd)	Manual immunohistochemistry (cont'd)
	200 & 70 KDA (phosphorylated)	Neurofilament (phosphorylated)
	Membrane staining in normal muscle.	Nitric Oxide Synthase-1
	Multimeric signal protein	P62
	Adhalin	Sarcoglycan-Alpha
	Gamma-Sarcoglycanopathy (LGMD2C)	Sarcoglycan-Gamma
	Membrane integrity	Spectrin 1
	T-cell marker	UCLH1
	Dystrophin related protein (DRP).	Utrophin (n-terminus)

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Neuropathology examinations to assist in clinical investigations (cont'd)	In house documented methods and manufacturer's instructions
Nerve biopsy on FFPE slides (Formalin fixed paraffin embedded)	Examination of tissues in order to identify or exclude morphological and cytological abnormalities for the purpose of diagnosis	Documented in house procedures in conjunction with manufacturer's instructions for: Specimen Preparation NP-LAB-SOP-013 Tissue Processing: Thermo Scientific Excelsior AS (biopsy processing) Thermo Scientific Excelsior ES (Post mortem processing) NP-LAB-SOP-004 Embedding: Embedding centre TES99 Medite medizintechnik Microtomy: Rotary Microtome – Leica RM2235 Base Sledge Microtome – Leica SM2400 NP-LAB-SOP-005
	Demonstration of:	Histochemical Staining Using Manual Techniques
	Basophilic and eosinophilic structures	Haematoxylin and Eosin NP-LAB-SOP-042
	Collagen	Haematoxylin Van Gieson NP-LAB-SOP-047
	Amyloid, elastic fibres	Sirius Red NP-LAB-SOP-049
	Ferric iron	Perl's Prussian blue NP-LAB-SOP-039

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Neuropathology examinations to assist in clinical investigations (cont'd)	In house documented methods and manufacturer's instructions
Nerve biopsy	Examination of frozen tissues in order to identify or exclude morphological and cytological abnormalities for the purpose of diagnosis	Documented in house procedures in conjunction with manufacturer's instructions for: Specimen Preparation NP-LAB-SOP-013 Cryotomy NP-LAB-SOP-012 Cryostat – Leica CM3050S
	Demonstration of:	Histochemical Staining Using Manual Techniques
	Basophilic and eosinophilic structures	Haematoxylin and Eosin NP-LAB-MET-016
	Collagen	Haematoxylin Van Gieson NP-LAB-MET-065
	Lipids	Oil Red O NP-LAB-MET-075
	Fungi, some bacteria, cerebrosides and sphingomyelin, sialomucins and neutral mucins, glycogen, starch, elastin, reticulin, some lipofuscins	Periodic Acid Schiff and Periodic Acid Schiff/Diastase NP-LAB-SOP-035 & NP-LAB-SOP-034
	Myelin sheaths	Solochrome Cyanine NP-LAB-SOP-040

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Neuropathology examinations to assist in clinical investigations (cont'd)	In house documented methods and manufacturer's instructions
Nerve Biopsy	Immunohistochemistry of histopathology samples of neurological origin to detect the following:	Manual immunohistochemistry using Vectastain Elite ABC and Biogenex Polymer HRP methods NP-LAB-SOP-007 NP-LAB-MET-010 NP-LAB-MET-015 Incorporating the following antibodies:
	B-cell marker	CD20 (L26)
	Pan T/B cell marker	CD45 (leucocyte common ab)
	Monocytes and macrophages	CD68 (macrophage KP1)
	Plasma cells	CD138
	Proliferating cells	MIB1 (Ki-67)
	Antibody to phosphorylated and unphosphorylated neurofilament,	Neurofilament (pan)
	200 & 70 KDA (phosphorylated)	Neurofilament (phosphorylated)
	T-cell marker	UCLH1
Fresh central nervous system tissue samples.	Intra-operative smears or frozen sectioning for the detection of abnormal cells	Supported by: NP/LAB/SOP/010;NP/LAB/SOP/012 Cryostat – Leica CM3050S Stains – NP-LAB-MET-088; NP-LAB-MET-089; NP-LAB-MET-016
Slides prepared as above	Morphological assessment and interpretation/diagnosis	NP/MGT/SOP/004 NP/MGT/SOP/005 NP/MGT/SOP/007

END