

Supplementary material

APPENDIX

Supplementary Table A

Antibodies used for immunohistochemical detection of SARS-CoV-2 in the brain

Study	SARS-CoV-2 Protein Target	Result	Human brain regions stained	Company	Antibody catalog number/clone (dilution)
Matschke et al. ²⁵	Spike	Positive (14/40 patients, 35% positive)	Positive: Medulla oblongata, brainstem cranial nerves (scattered cells in brain- cell type not specified; glossopharyngeal or vagus nerves) Negative: Olfactory bulb, superior frontal gyrus, basal ganglia, and cerebellar hemisphere	GeneTex, Irvine, USA	GTX632604 clone 1A9 (dilution: 1:300)
	Nucleocapsid	Positive (7/40 patients, 17.5% positive)	Positive: Medulla oblongata, brainstem cranial nerves (scattered cells in brain- cell type not specified; glossopharyngeal or vagus nerves) Negative: Olfactory bulb, superior frontal gyrus, basal ganglia, and cerebellar hemisphere	Sino Biological, Eschborn, Germany	40143-T62 (dilution 1:1,000) 40143-R001 (dilution 1:5,000)
Song et al. ⁸⁷	Spike	Positive	Positive: Cerebral cortex, subcortical white matter infarcts (neurons, endothelium) Negative: Basal ganglia, substantia nigra	GeneTex, Irvine, USA	GTX632604 clone 1A9 (dilution: 1:400)
Solomon et al. ⁹⁷	Nucleocapsid	Negative (18 patients; Non-specific choroid plexus staining present)	Inferior frontal lobe with olfactory tract/bulb(s), cingulate gyrus with corpus callosum, hippocampus, occipital lobe, anterior basal ganglia, thalamus, cerebellum, midbrain, pons, and medulla	Novus Biologicals, Centennial, CO	NB100-56576 (dilution: 1:500)
Kantonen et al. ⁹⁹	Spike	Negative (4 patients)	"Selected samples of CNS", "respiratory control areas", olfactory epithelium	Sino Biological (Location not specified)	SARS-CoV-2/2019 nCoV Spike antibody, rabbit (dilution: 1;10,000)
Al-Dalahmah et al. ⁸⁹	Nucleocapsid	Negative (1 patient)	Inferior olives, dentate nuclei	Sino Biological (Location not specified)	40143-R001 (dilution not specified)