

Table S1: Vaccination History of Participants

	<i>N</i>
mRNA Vaccination preceeding PACVS Onset	
Moderna (SpikeVax)	32
BioNTech (Comirnaty)	159
Vaccination Cycles before PACVS Onset	
1 cycle	47
2 cycles	96
3 cycles	48
Vaccination Regimen before PACVS Onset	
1x BioNTech	41
2x BioNTech	72
3x BioNTech	27
1x Moderna	6
2x Moderna	11
3x Moderna	6
Moderna/ BioNTech	1
2x BioNTech/ Moderna	8
2x Moderna/ BioNTech	2
Astra-Zeneca/ BioNTech	7
Astra-Zeneca/ Moderna	1
Astra-Zeneca/ 2x BioNTech	5
Janssen/ BioNTech	3
Janssen/ Moderna	1

Table S2: Meta Data and In-/Exclusion Criteria of Controls and PACVS Subjects

Controls	$N = 89$, Gender: 71 female, 18 male ($p < 0.001$) Age (years, range/mean/median): 21 - 64, 39/49 ($p < 0.0001$)
	Inclusion: Initial dual vaccination with Spikevax (Moderna), spaced six weeks Monitoring period: six months after second vaccination Donation of serum sample 48 h before first and 6 months after second vaccination
	Exclusion: De novo disease symptoms during monitoring period: <ul style="list-style-type: none"> - Immunological/ rheumatological disorders (myalgia, RBV-reactivation, inflammation, arthritis) - Cardiovascular disorder (pressure crisis, heart insufficiency, arrhythmia, sinus tachycardia, ischemia) - Neurologic disorder (cognitive impairment, peripheral nerve dysfunction, muscular fibrillation or paresis) - Other disease or health condition entailing occupational impairment Increased laboratory markers in post-vaccination serum: <ul style="list-style-type: none"> - IL-6 > 7 pg/ml, CRP > 0.5 mg/dl, pBNP > 125 pg/ml, TpT > 11 ng/ml, IgG < 700, > 1600 mg/dL - SARS-CoV-2 nucleocapsid antibodies indicative of passed SARS-CoV-2 infection
Participants.	$N = 191$, Gender: 159 females, 32 males ($p < 0.001$) Age (years, range, mean/median): 18 - 66, 40/39 years ($p < 0.0001$)
	Inclusion: Development of symptoms or disease after SARS-CoV-2 vaccination with mRNA-vaccine (Moderna or Pfizer/BioNTech) Established or suspected diagnosis of syndrome or ≥ 3 symptoms thereof ¹ Start of symptoms ≥ 1 week after first and/or ≤ 4 weeks after last vaccination Persistent symptoms for ≥ 5 months Completion of on-line query Donation of serum sample at ≥ 5 months after onset of symptoms Diseases/ syndromes (only included if occurring/diagnosed ¹ after SARS-CoV-2 vaccination): <ul style="list-style-type: none"> - Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) - Post-Covid-19/long Covid-19 syndrome in the absence of SARS-CoV-2-infection - Post vaccination syndrome - Postural Tachycardia Syndrome (POTS) - Mastcell activation syndrome (MCAS) - Fibromyalgia/chronic pain syndrome - Peri-/Myocarditis - Thrombosis - Small fiber neuropathy (SFN) - Bell's palsy - Guillain-Barré syndrome (GBS) - Vaccine-induced hyperinflammation - Other adverse vaccination reactions including herpes zoster Included symptoms (≥ 3): <ul style="list-style-type: none"> - Immunological/ rheumatological disorders (e.g. myalgia, joint pain, swollen/painful lymph nodes) - Cardiovascular disorder (e.g. orthostatic intolerance, arrhythmia, sinus tachycardia, palpitations) - Neurologic disorder (e.g. cognitive impairment, peripheral nerve dysfunction, sensomotor paresis) - Other consensus symptoms of ME/CSF [7]
	Exclusion: Potentially confounding chronic medication pre- and post-vaccination <ul style="list-style-type: none"> - anti-psychotic, anti-depressive - immunosuppressive, anti-proliferative, anti-inflammatory - anti-biotic - immunomodulative treatment after vaccination Potentially confounding health condition existing before vaccination <ul style="list-style-type: none"> - immunological disease (e.g. Post-COVID, Long-COVID, rheumatic disease) - musculoskeletal disease (e.g. ME/CFS, Fibromyalgia, Complex regional pain syndrome) - neurological disease (e.g. Multiple Sclerosis, Neuromyelitis Optica spectrum disorders, GBS, Chronic inflammatory demyelinating polyneuropathy (CIPD), Polyneuropathy other origin than CIPD) - Psychiatric disorder (e.g. Depression, Anxiety disorder, Post-traumatic stress disorder, Obsessive compulsive disorder) - Malignancies, transplantations Symptoms following other vaccination (incl. non-mRNA SARS-CoV-2 vaccination)

¹By a physician in hospital or general practice

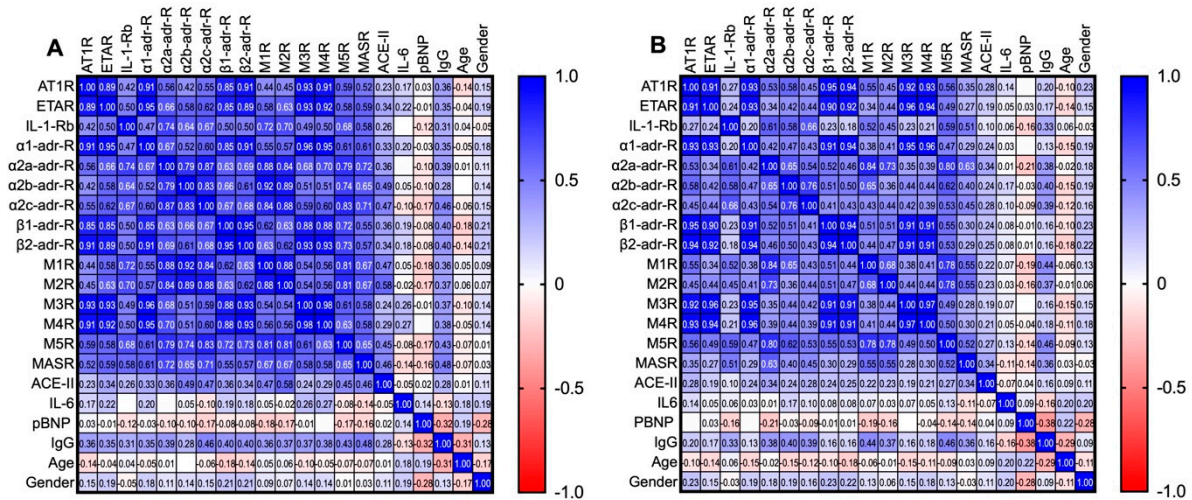


Figure S1. Co-variance of Receptor Antibodies in Serum of healthy Volunteers (n=89): Age, gender and serum values determined 48 h before first (A) and 6 months after second (B) SARS-CoV-2 vaccination (Spikevax, Moderna). Numerical values: Spearmans's R, values ≥ 0.7 considered significant ($p < 0.0001$).

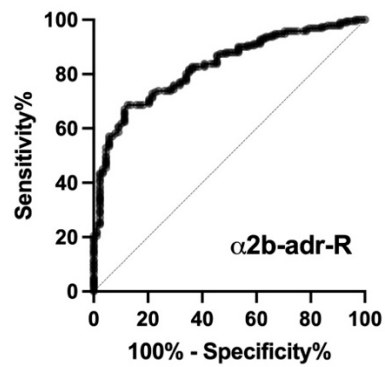
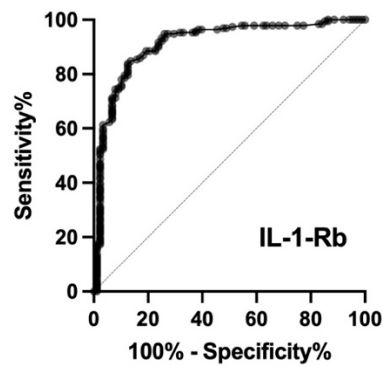
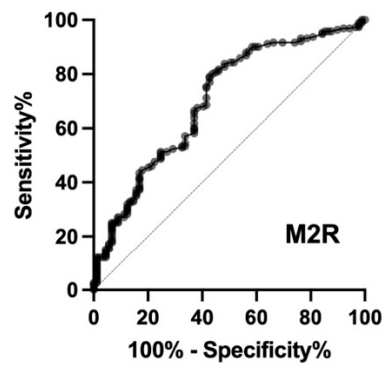
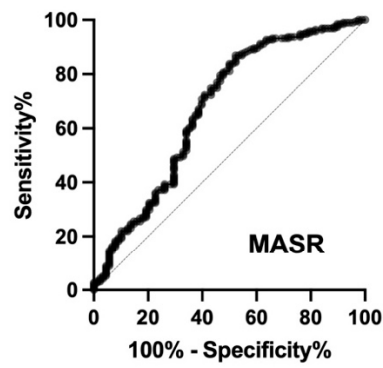
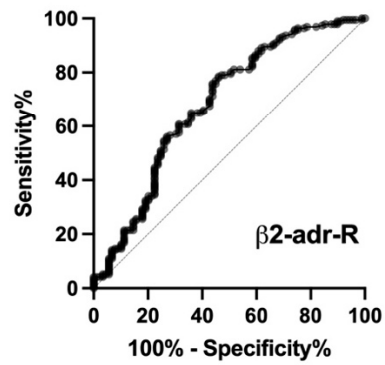
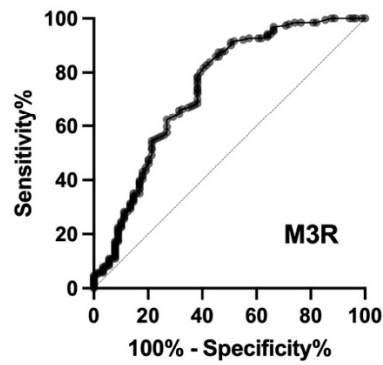
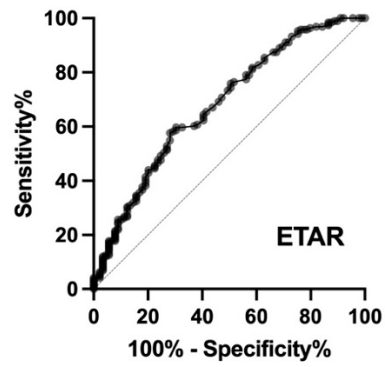
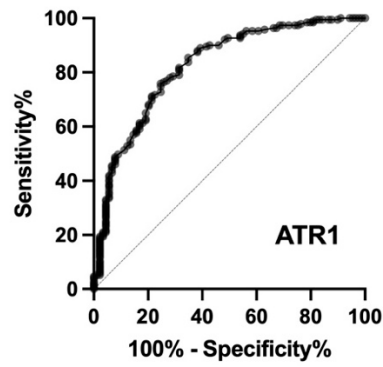


Figure S2. ROC curves of Receptor Antibodies discriminating PACVS Subjects from post-Vaccination Controls

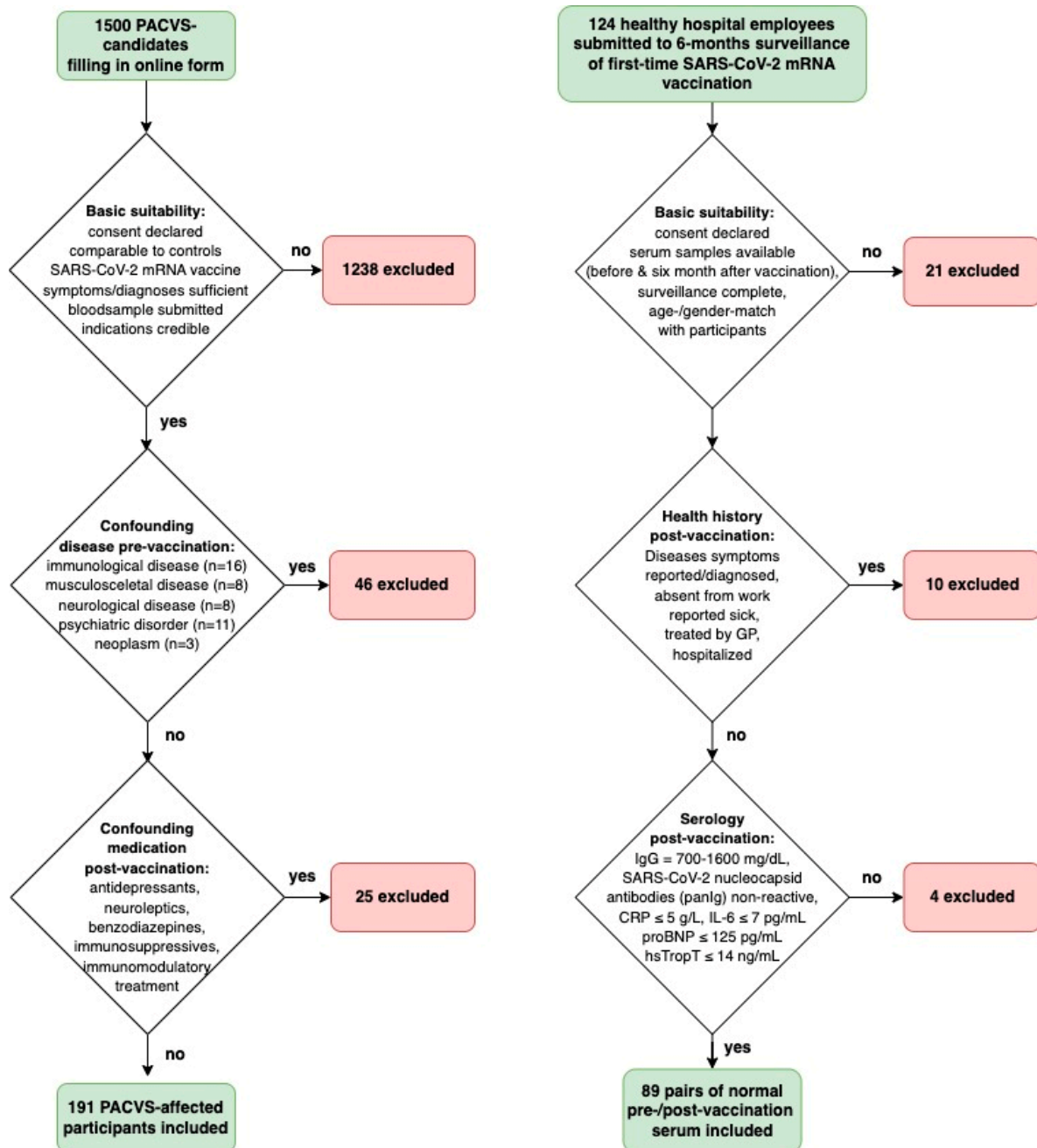


Figure S3. Flow charts of inclusion of study participants (left) and controls (right). In-/exclusion criteria are listed in Table S2. Serological surveillance of healthy hospital employees used as source for controls as described in [37].