Table S1 Treatment-Related Adverse Events (TEAEs) Reported in ≥5% of Patients (All Causality)

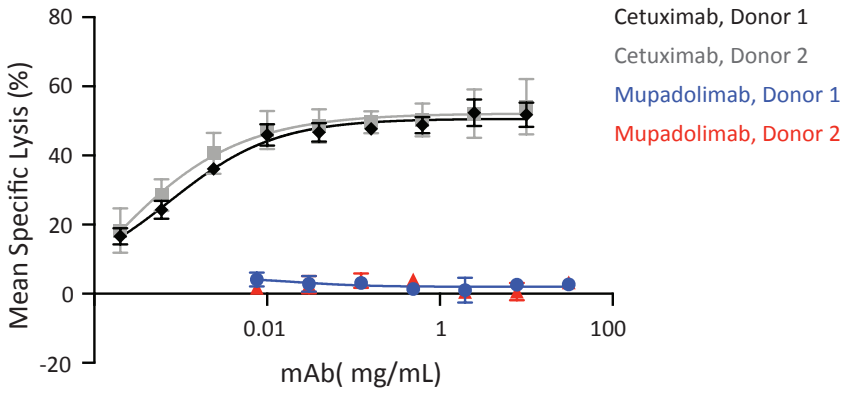
	Mupadolimab Monotherapy N=35*	
Preferred Term	**Any Grade n(%)**	**Grade 3, 4, 5 n(%)**
Subjects with any TEAE	33 (94.3)	17 (48.6)
Chills	13 (37.1)	0 (0.0)
Fatigue	8 (22.9)	0 (0.0)
Anaemia	7 (20.0)	1 (2.9)
Decreased appetite	7 (20.0)	0 (0.0)
Nausea	7 (20.0)	0 (0.0)
Vomiting	7 (20.0)	0 (0.0)
Constipation	6 (17.1)	0 (0.0)
Arthralgia	5 (14.3)	1 (2.9)
Dehydration	4 (11.4)	0 (0.0)
Diarrhoea	4 (11.4)	0 (0.0)
Hyperglycaemia	4 (11.4)	1 (2.9)
Pain in extremity	4 (11.4)	0 (0.0)
Pruritus	4 (11.4)	0 (0.0)
Pyrexia	4 (11.4)	0 (0.0)
Tumour pain	4 (11.4)	0 (0.0)
Weight decreased	4 (11.4)	0 (0.0)
Abdominal distension	3 (8.6)	0 (0.0)
Abdominal pain	3 (8.6)	0 (0.0)
Alanine aminotransferase increased	3 (8.6)	1 (2.9)
Aspartate aminotransferase increased	3 (8.6)	2 (5.7)
Back pain	3 (8.6)	0 (0.0)
Blood creatinine increased	3 (8.6)	0 (0.0)
Cough	3 (8.6)	0 (0.0)
Dizziness	3 (8.6)	0 (0.0)
Dyspnoea	3 (8.6)	1 (2.9)
Arthritis	2 (5.7)	0 (0.0)
Blood alkaline phosphatase increased	2 (5.7)	1 (2.9)
Blood bilirubin increased	2 (5.7)	1 (2.9)
Cognitive disorder	2 (5.7)	1 (2.9)
Flank pain	2 (5.7)	0 (0.0)
Haematuria	2 (5.7)	0 (0.0)
Headache	2 (5.7)	0 (0.0)
Hydronephrosis	2 (5.7)	0 (0.0)
Hyperkalaemia	2 (5.7)	0 (0.0)
Hypertension	2 (5.7)	0 (0.0)
Hypoalbuminaemia	2 (5.7)	0 (0.0)

	Mupadolimab Monotherapy N=35*	
Preferred Term	**Any Grade n(%)**	**Grade 3, 4, 5 n(%)**
Hypocalcaemia	2 (5.7)	0 (0.0)
Hyponatraemia	2 (5.7)	1 (2.9)
Hypophosphataemia	2 (5.7)	0 (0.0)
Insomnia	2 (5.7)	0 (0.0)
Lethargy	2 (5.7)	0 (0.0)
Lipase increased	2 (5.7)	0 (0.0)
Lymphopenia	2 (5.7)	1 (2.9)
Muscle spasms	2 (5.7)	0 (0.0)
Musculoskeletal pain	2 (5.7)	0 (0.0)
Paraesthesia	2 (5.7)	0 (0.0)
Upper respiratory tract infection	2 (5.7)	0 (0.0)
Urinary tract infection	2 (5.7)	0 (0.0)
Visual impairment	2 (5.7)	0 (0.0)

*One patient was evaluable for safety only.

Figure S1

A



B

Antibody	KD (M)	Kon (1/Ms)	Kdis (1/s)
Mupadolimab	2.07E-10	3.18E+05	6.58E-05
MEDI9447	9.05E-11	4.40E+05	3.98E-05

Figure S1. (**A**) Mupadolimab does not induce ADCC. MDA-MB-231 cells were incubated with increasing concentrations of mupadolimab or anti-EGFR antibody cetuximab (positive control). ADCC activity was determined in two independent experiments with human PBMCs from 2 human donors. (**B**) Binding of mupadolimab or MEDI9447 to recombinant CD73-His was measured by Octet.

Figure S2

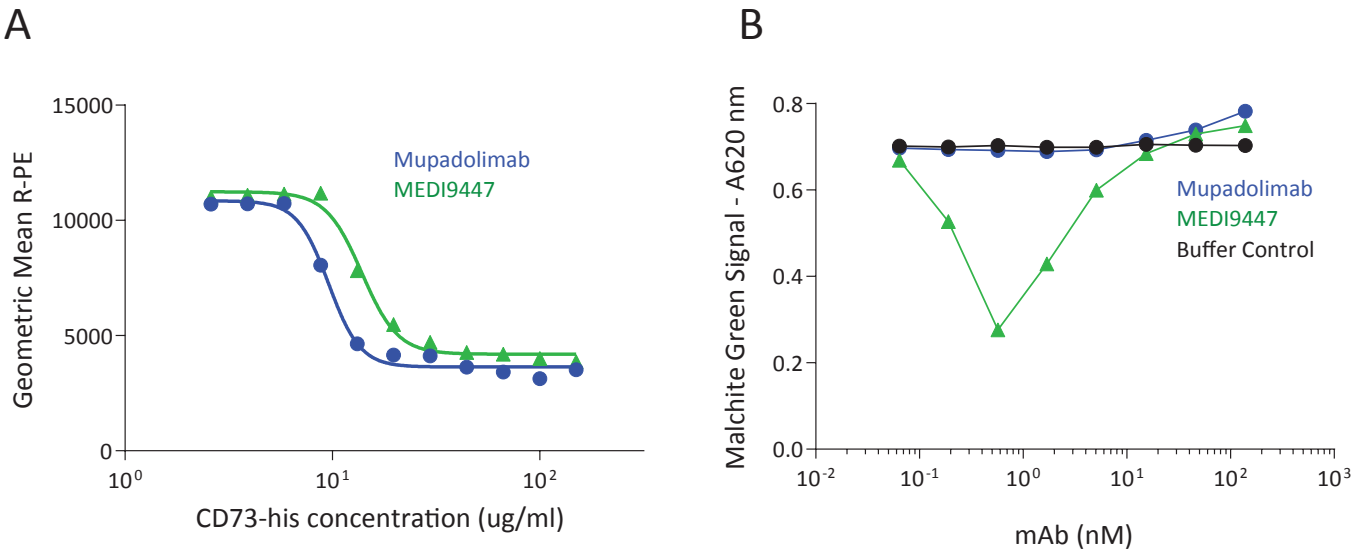


Figure S2. (**A**) Both mupadolimab and MEDI9447 bind to soluble CD73. 10 mg/mL mupadolimab or MEDI9447 was pre-incubated with a titration of soluble CD73, followed by staining of CD73-expressing cells that are detected with secondary antibody by flow cytometry. Preincubation of anti-CD73 antibodies with soluble state of CD73 reduced the binding to $CD73^{pos}$ cell. (**B**) CD73 catalytic activity was measured with soluble CD73 in the presence of mupadolimab, MEDI9447, or buffer control by adding 100 mM AMP and measuring phosphate levels after 15 min incubation.

Figure S3

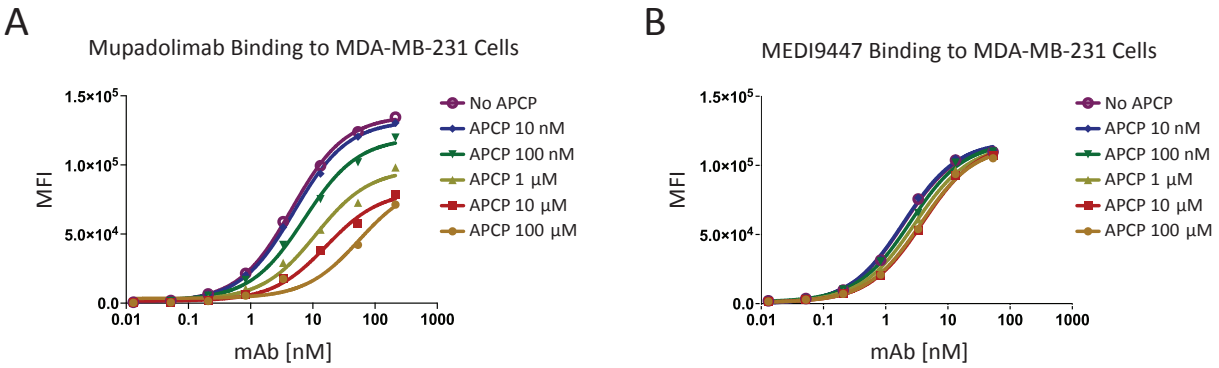


Figure S3. Mupadolimab and MEDI9447 inhibit CD73 via distinct mechanisms. MDA-MB-231 cells were pre-incubated with APCP and were subsequently incubated with a titration of mupadolimab (**A**) or MEDI9447 (**B**) prior to staining with a PE conjugated anti-human secondary antibody. Antibody binding was assessed by flow cytometry and mean fluorescence intensity (MFI) for PE was determined.

Figure S4

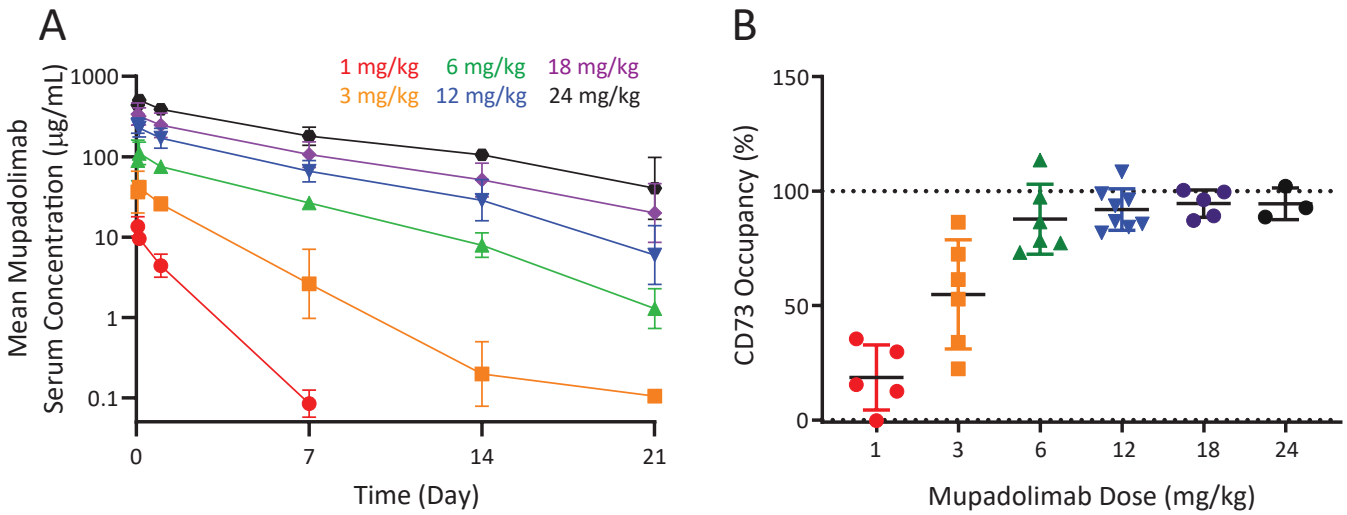


Figure S4: Mupadolimab pharmacokinetics and CD73 occupancy. (**A**) Serum samples were collected from patients treated with mupadolimab monotherapy and the level of free mupadolimab were measured. Error bars represent geometric mean ± geometric SD. (**B**) Whole blood samples from patients treated with mupadolimab were fixed and receptor occupancy was measured by flow cytometry gating on CD73+ B cells. Each symbol represents a treated patient.