

## Product Datasheet

# SARS-CoV-2 (COVID-19) Spike Neutralization Single Domain Antibody [E10] (orb1274179)

<b>Catalog Number</b>	orb1274179
<b>Category</b>	Antibodies
<b>Description</b>	SARS-CoV-2 (COVID-19) Spike Neutralization Single Domain Antibody [E10]
<b>Target</b>	S
<b>Clonality</b>	Recombinant
<b>Species/Host</b>	Camelus
<b>Isotype</b>	sdAb
<b>Conjugation</b>	Unconjugated
<b>Reactivity</b>	Virus
<b>Form/Appearance</b>	Liquid
<b>Concentration</b>	batch dependent
<b>Buffer/Preservatives</b>	SARS-CoV-2 (COVID-19) Spike Neutralization Antibody is supplied in PBS.
<b>Purification</b>	SARS-CoV-2 (COVID-19) Spike Neutralization Antibody is affinity chromatography purified via Nickel column. Antibody is supplied as a His-tagged purified protein. It also contains a myc-tag for detection.
<b>Immunogen</b>	SARS-CoV-2 S protein RBD containing C-terminal His Tag. The protein was expressed in human 293 cells (HEK293). It contains amino acids Arg 319 - Lys 537.
<b>UniProt ID</b>	<b>PODTC2</b>

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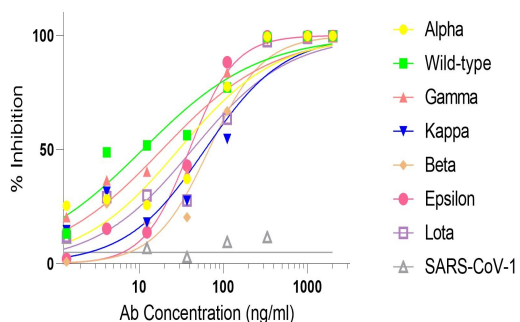
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<b>Tested applications</b>	ELISA, NeA
<b>Antibody Type</b>	Primary Antibody
<b>Clone Number</b>	E10
<b>Modifications</b>	None
<b>Storage</b>	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
<b>Dry Ice Shipping</b>	<b>Please note: This product requires shipment on dry ice. A dry ice surcharge will apply.</b>
<b>Note</b>	For research use only
<b>NCBI</b>	<b>QHD43419</b>
<b>Expiration Date</b>	12 months from date of receipt.

E10 Neutralization of SARS-CoV-2 Pseudovirus Variants



Pseudovirus neutralization assay. Antibodies: SARS-CoV-2 (COVID-19) Spike RBD Antibodies, orb1274179 (E10). Luciferase reporter virus-like particles and 293T-hsACE2 cells were used for the assay. After 72 hrs incubation infectivity was measured by luciferase expression using Promega Renilla-Glo Luciferase Assay System. Infectivity was measured as RLU and no sdAb control was set to 100% infectivity. Neutralization activity of orb1274179 (E10) was measured over a serial dilution to determine the half-maximal inhibitory concentration (IC50). orb1274179 (E10) exhibited a dose dependent neutralizing effect on all the variant pseudoviruses tested.

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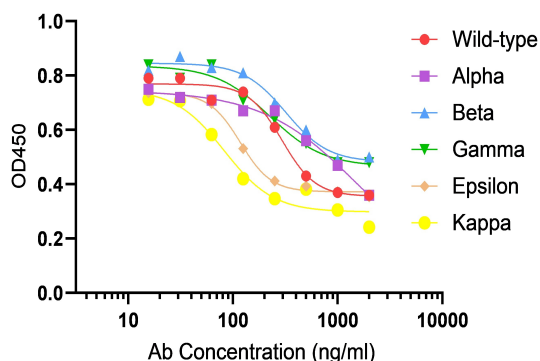
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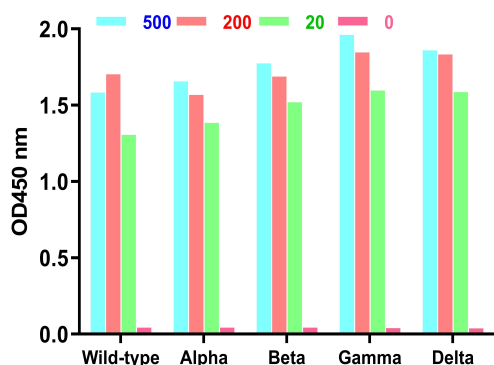
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ACE2-RBD binding inhibitory ELISA. Antibodies: SARS-CoV-2 (COVID-19) Spike RBD Antibodies, orb1274179. ACE2-RBD binding inhibitory ELISA was performed using RBD protein of SARS-CoV-2 variants (wild-type, alpha, beta, epsilon, gamma and kappa) as coating antigens at 1 µg/mL and the anti-SARS-CoV-2 (COVID-19) RBD antibody orb1274179 as the capture antibody, followed by incubation with 20 ng/mL human ACE2-Fc. Bound h-ACE2-Fc was detected with a goat anti-human IgG-HRP conjugate (1:20000 dilution) using the TMB chromogenic substrate system. orb1274179 exhibited a dose dependent inhibitory effect on ACE2 binding to RBDs of all the variants tested.



ELISA Validation with RBDs of SARS-CoV-2 Variants. Antibodies: SARS-CoV-2 (COVID-19) Spike RBD Antibody, orb1274179. A direct ELISA was performed using RBD protein of SARS-CoV-2 variants (wild-type, alpha, beta, gamma and Delta) as coating antigens at 1 µg/mL and the anti-SARS-CoV-2 (COVID-19) RBD antibody (orb1274180) as the capture antibody, followed by anti-cMyc-tag antibody (orb1239964) at 1 µg/mL. Secondary: Goat anti-mouse IgG HRP conjugate at 1:5000 dilution. orb1274180 binds to RBDs of all the variants tested.

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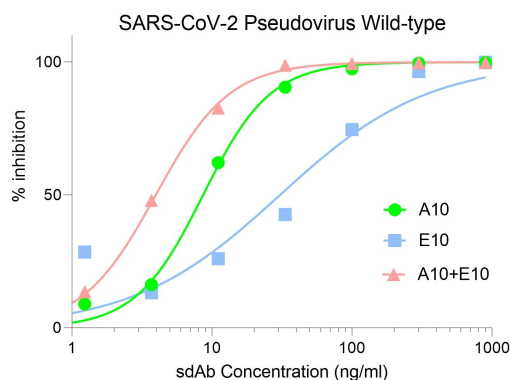
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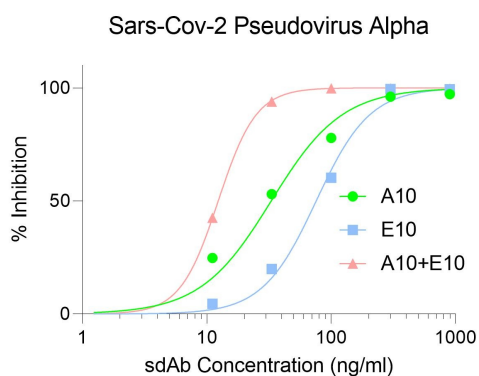
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Pseudovirus neutralization assay. Antibodies: SARS-CoV-2 (COVID-19) Spike RBD Antibodies, orb1274180 (A10) and orb1274179 (E10). Luciferase reporter virus-like particles and 293T-hsACE2 cells were used for the assay. After 72 hrs incubation infectivity was measured by luciferase expression using Promega Renilla-Glo Luciferase Assay System. Infectivity was measured as RLU and no sdAb control was set to 100% infectivity. Neutralization activity of orb1274180 (A10) and orb1274179 (E10) was measured over a serial dilution series to determine the half-maximal inhibitory concentration (IC50). Both orb1274180 (A10) and orb1274179 (E10) exhibited a dose dependent neutralizing effect on wild-type pseudoviruses, and the combination of the two showed a significantly synergistic effect.



Pseudovirus neutralization assay. Antibodies: SARS-CoV-2 (COVID-19) Spike RBD Antibodies, orb1274180 (A10) and orb1274179 (E10). Luciferase reporter virus-like particles and 293T-hsACE2 cells were used for the assay. After 72 hrs incubation infectivity was measured by luciferase expression using Promega Renilla-Glo Luciferase Assay System. Infectivity was measured as RLU and no sdAb control was set to 100% infectivity. Neutralization activity of orb1274180 (A10) and orb1274179 (E10) was measured over a serial dilution series to determine the half-maximal inhibitory concentration (IC50). Both orb1274180 (A10) and orb1274179 (E10) exhibited a dose dependent neutralizing effect on alpha pseudoviruses, and the combination of the two showed a significantly synergistic effect.

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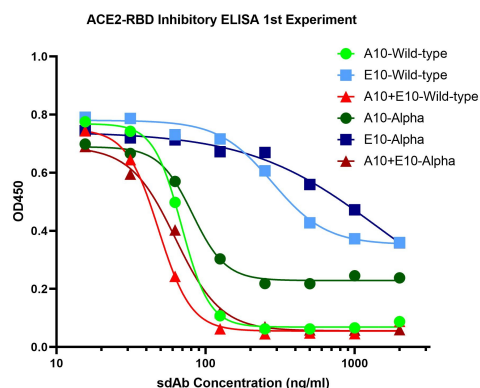
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