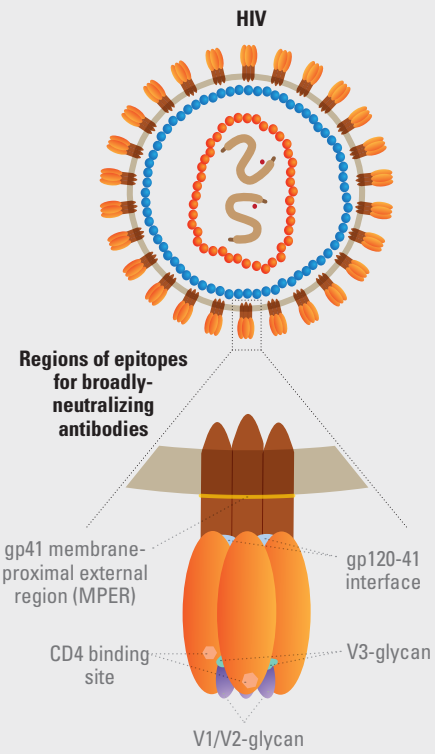
HIV-SPECIFIC NEUTRALIZING ANTIBODIES: A guide to targets and candidates



Most of today's licensed effective vaccines teach the body how to make antibodies that defend against infection. These potent immune responses could be a key to HIV vaccine-induced protection. Scientists in this complex field continue to make strides.

HIV trimer target	Antibody	Research highlights
CD4 binding site	3BNC117	Well-tolerated and enhanced anti-HIV antibody-based responses in a Phase I dose- escalation study in people living with HIV and HIV-negative individuals. Further early-phase trials for prevention ongoing and planned in combination with other antibodies.
	VRC01	Two large-scale proof-of-concept trials are testing VRC01 infusions in HIV-negative cisgender men and transgender men and women who have sex with men (North and South America) and HIV-negative women (sub-Saharan Africa). Two Phase I studies of VR01 and VRC01LS, delivered via intravenous infusions (IV) and subcutaneous (SC) routes, are ongoing and planned in the US with HIV-negative participants. One ongoing Phase I single-dose study is evaluating VRC01LS as treatment in participants living with HIV.
	VRC07-523	Two Phase I studies are ongoing and planned of VRC07-523.LS administered via IV and/or SC in people living with HIV (US) and HIV-negative individuals (South Africa).
	N6	Identified in early studies as exceptionally broad and potent, capable of neutralizing 98% of strains. Currently in cell-line development for clinical trials.
gp41 membrane proximal external region (MPER)	10e8	Planned for clinical trials.
gp120-41 interface	8ANC195	Not yet planned for clinical trials.
V1/V2-glycan	CAP256-VRC26	Planned Phase I study will test CAP256-VRC26.25LS, delivered via SC or IV routes, in people living with HIV and HIV-negative individuals (South Africa).
	PGDM1400	Identified in animal studies as exceptionally broad and potent with cross-clade neutralization coverage of 83% at low doses. In cell-line development for clinical trials.
	PG9	Ongoing Phase I trial establishing safety and optimal doses of AAV vector gene-transfer approach in HIV-negative adult males (UK).
V3-glycan	PGT121	Ongoing Phase I study, delivering antibody via IV routes in HIV-negative individuals (US).
	10-1074	Phase I open-label trial evaluating safety and antiretroviral effects in both people living with HIV and HIV-negative individuals demonstrated safety and suppressed viremia in most participants living with HIV.
Combinations	3BNC117+10-1074	Phase I study testing antibody combination as prophylaxis in HIV-negative individuals has concluded recruitment and final data collection is underway (US).
	CAP256-VRC26 +PGT121 CAP256-VRC26 +VRC07	Phase II studies planned in HIV-negative individuals, contingent upon safety profile and immune response data in Phase I clinical trials of individual antibodies (South Africa).