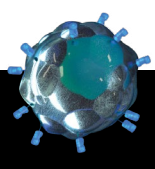
ARCELLX®

SEE THE D-DOMAIN IN ACTION

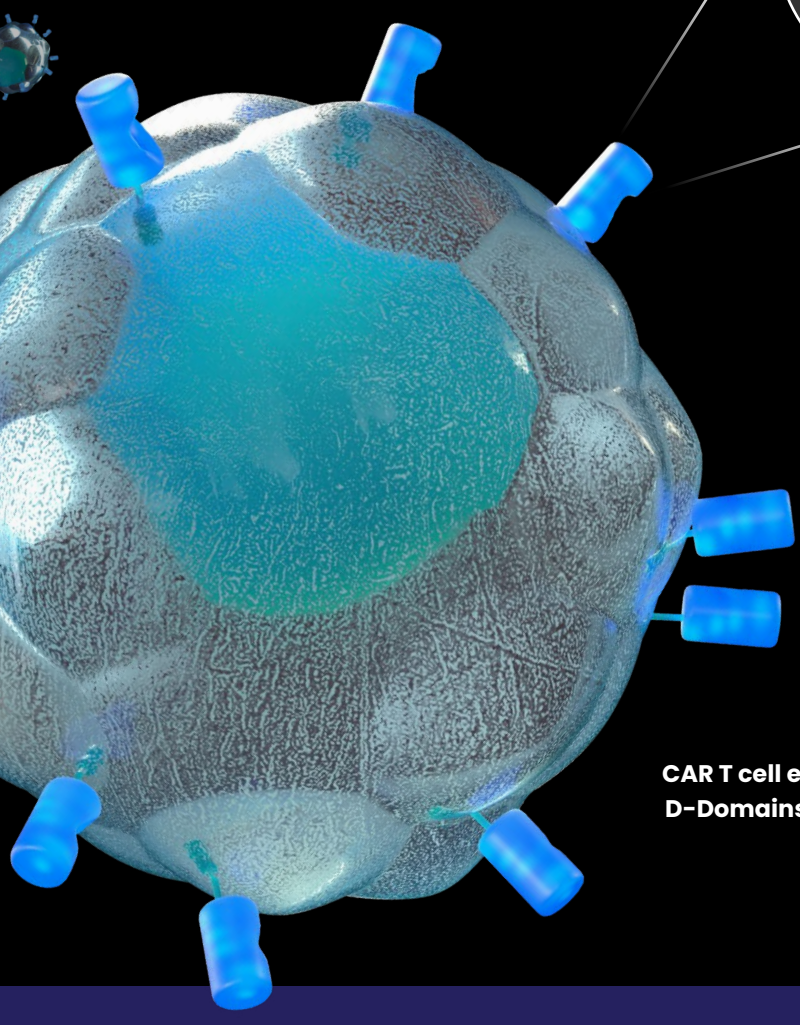
# Welcome to the new D-Domain



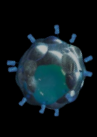
**The D-Domain is a small, compact, and stable protein, approximately one-third of the size of binding domains used in conventional chimeric antigen receptors (CARs).[1-3]**

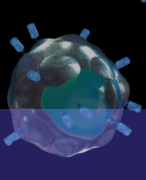
**D-Domain**
~8 kDa, triple alpha-helical bundle[1,2]





**CAR T cell expressing D-Domains (ddCAR)**





## The D-Domain is a new type of antigen-binding scaffold for CAR T cells with several unique attributes[1]

The D-Domain vector has high transduction efficiency.[1,2]

The D-Domain is highly expressed on the surface of CAR T cells. In preclinical studies, high CAR surface expression could enhance T-cell avidity.[1,4,5]

The D-Domain has a low propensity to aggregate. Preclinical studies have shown that aggregation of CARs can lead to tonic signaling in the absence of binding to a target cell.[6-9]

## Ready to see the D-Domain in action?

**EXPLORE THE TECHNOLOGY**

**The safety and efficacy of this technology have not been established. This investigational technology has not been approved, cleared, or licensed.**

**References: 1.** Buonato JM, Edwards JP, Zaritskaya L, et al. Preclinical efficacy of BCMA-directed CAR T cells incorporating a novel D domain antigen recognition domain. *Mol Cancer Ther*. 2022;21(7):1171-1183. doi:10.1158/1535-7163.MCT-21-0552. **2.** Qin H, Edwards JP, Zaritskaya L, et al. Chimeric antigen receptors incorporating D domains targeting CD123 direct potent mono- and bi-specific antitumor activity of T cells. *Mol Ther*. 2019;27(7):1262-1274. doi:10.1016/j.ymthe.2019.04.010. **3.** Frigault M, Rosenblatt J, Dhakal B, et al. Phase 1 study of CART-ddBCMA for the treatment of patients with relapsed and/or refractory multiple myeloma: results from at least 1-year follow-up in all patients. Presented at The American Society of Hematology Annual Meeting; December 2023; San Diego, CA. **4.** Greenman R, Pizem Y, Haus-Cohen M, et al. Phenotypic models of CAR T-cell activation elucidate the pivotal regulatory role of CAR downmodulation. *Mol Cancer Ther*. 2021;20(5):946-957. doi:10.1158/1535-7163.MCT-19-1110. **5.** Caballero AC, Escribà-Garcia L, Pujol-Fernàndez P, et al. High CAR intensity of expression confers enhanced antitumor effect against lymphoma without functional exhaustion. *Cancer Gene Ther*. 2023;30(1):51-61. doi:10.1038/s41417-022-00518-6. **6.** Data on file, Arcellx, Inc. **7.** Long AH, Haso WM, Shern JF, et al. 4-1BB costimulation ameliorates T cell exhaustion induced by tonic signaling of chimeric antigen receptors. *Nat Med*. 2015;21(6):581-590. doi:10.1038/nm.3838. **8.** Long AH, Haso WM, Shern JF, et al. 4-1BB costimulation ameliorates T cell exhaustion induced by tonic signaling of chimeric antigen receptors. Supplementary appendix. *Nat Med.* 2015;21(6):581-590. Accessed November 15, 2023. https://static-content.springer.com/esm/art%3A10.1038%2Fnm.3838/MediaObjects/41591_2015_BFnm3838_MOESM8_ESM.pdf. **9.** Hanssens H, Meeus F, De Veirman K, Breckpot K, Devoogdt N. The antigen-binding moiety in the driver's seat of CARs. *Med Res Rev.* 2022;42(1):306-342. doi:10.1002/med.21818.

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