

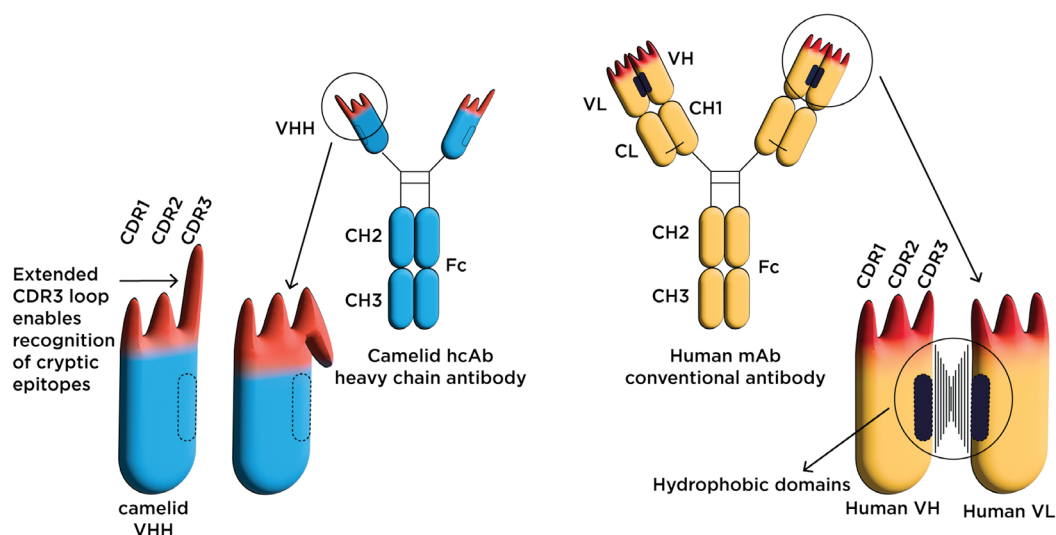


# RECOMBINANT SINGLE DOMAIN (VHH) ANTI-CD38 ANTIBODIES

## A NEW CLASS OF PROBES FOR THE ERA OF BIOLOGICALS

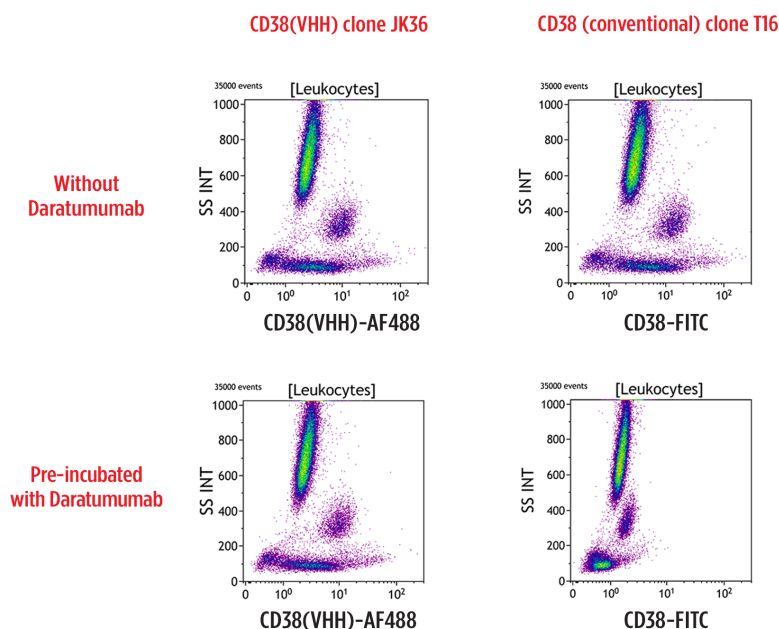
Therapeutic antibodies, either designed to exert antibody-dependent cellular cytotoxicity (ADCC) or to interrupt receptor-ligand interactions, frequently compete with conventional analytical monoclonal antibodies due to epitope overlapping, limiting the ability to study surface expression of the occupied antigen at the single cell level.

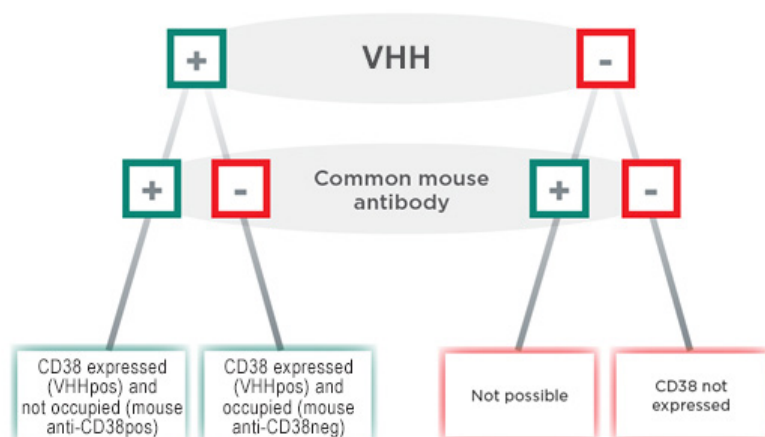
Single domain antibodies, constituted by the variable heavy domains of heavy chain antibodies (VHHs) that naturally occur in llamas and other camelids, can overcome these undesired interferences due to their extended complementarity-determining region 3 (CDR3), allowing them to recognize epitopes hidden to conventional antibodies.



Adapted from Bannas P, Hambach J, Koch-Nolte F. Nanobodies and Nanobody-Based Human Heavy Chain Antibodies As Antitumor Therapeutics. Front Immunol. 2017 Nov 22;8:1603.

After pre-incubation of a normal donor blood sample with Daratumumab, the conventional antibody clone T16 fails to label the occupied CD38 epitope. In contrast, the CD38(VHH) staining pattern and intensity remains unchanged, confirming binding to an epitope which is not masked by Daratumumab (data was acquired on a Navios Flow Cytometer).





Beyond rescuing the detection of surface-expressed CD38 in the presence of CD38-masking antibodies, the CD38(VHH) antibody may grant valuable biological insight when used together with a conventional CD38 antibody.

#### Ordering Information :

#### CD38(VHH)

Form	Clone	Size	Format	Part #	Status	Line	Quality Standard
AF488	<b>JK36</b> (rabbit Fc/camelid VHH chimera)	50 tests	Liquid	<b>C94642</b>	RUO	IOTest	cGMP
AF700	<b>JK36</b> (rabbit Fc/camelid VHH chimera)	50 tests	Liquid	<b>C94643</b>	RUO	IOTest	cGMP

#### Related Product

DURAClone RE PC Tube, 25 Tests, RUO, Part # B80394

The DURAClone RE PC tube is a dried unitized 8-color, 8-monoclonal antibody reagent that allows the identification of abnormal plasma cells in human bone marrow samples post red blood cell lysis. Its fluorochrome configuration is compatible with CD38(VHH)-AF700 (C94963).

Detection of CD45 <sup>dim</sup> CD38 <sup>+</sup> CD138 <sup>+</sup> CD56 <sup>+</sup> CD200 <sup>+</sup> CD19 <sup>dim</sup> CD27 <sup>dim</sup> CD81 <sup>dim</sup> plasma cells											
DURAClone RE PC Tube	PB	KrO	FITC	PE	ECD	PC5.5	PC7	APC	APC-AF700	APC-AF750	Quality Standard
B80394 (25 tests RUO)	CD38	CD45	CD81	CD27	-	CD19	CD200	CD138	-	CD56	ISO 9001-2015

Drop-in option  
CD38(VHH)-AF700 (C94963)

AF 488 : Alexa Fluor\* 488

AF 700 : Alexa Fluor\* 700

PB : Pacific Blue \*

KrO : Krome Orange

APC-A700 : APC-Alexa Fluor\* 700

APC-A750 : APC-Alexa Fluor\* 750

\* Alexa Fluor and Pacific Blue are registered trademarks of Molecular Probes, Inc.

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