

PRODUCT SPECIFICATION

Recombinant anti-human L-plastin nanobody 5-V5-His₆.



Catalogue number: sdAb-Plastin-Nb5-V5

Background

L-plastin is a member of a small family of actin bundling proteins. Unlike fascin, L-plastin generates actin bundles that are more loosely connected. L-plastin expression is normally restricted to immune cells but is ectopically expressed in tumor cells and contributes to tumor cell invasion.

Nanobody 5 inhibits filopodium formation and motility of PC-3 prostate cancer cells, when expressed as an intrabody. It also perturbs stability of immune cell podosomes and cancer cell invadosomes. This is due to the fact that it blocks the bundling activity of L-plastin.

Applications: PD, IP, ELISA. This product is for R&D use only, not for drug, diagnostic, therapeutic, household, or other uses.

Source and properties

L-plastin nanobody 5 was raised by immunizing an alpaca with full length human recombinant L-plastin. It binds to L-plastin with an **approximate affinity of 50 nM (determined by ITC) and calcium has no significant effect on the binding**. Plastin nanobody 5 interacts with the Calponin Homology (CH) domains combined, in the central region of L-plastin.

Availability: Nanobody 5-V5 comes with a COOH-terminal V5 tag followed by a His₆ tag. Available in 100 µg, 500 µg, 1000 µg quantities. For bulk amounts, please inquire.

Expression host: VHH single domain antibody purified from *E. coli*.

Cross reactivity: Reactivity of this nanobody with L-plastin from other species has not been tested.

Storage buffer: 20 mM Tris-HCl pH 8.0, 150 mM NaCl, 1mM DTT, 60 % glycerol. Store at -20°C. The sample will not freeze. Maintain sample in cold environment during transport to increase longevity.

Stability: Store at -20°C upon arrival. For long term storage, aliquot and store at -80°C. Avoid repeated freeze/thaw cycles.

Product citations:

1. Van Audenhove I, Denert M, Boucherie C, et al. 2016. *J Biol Chem.* 291, 9148-60.
2. De Clercq S, Boucherie C, Vandekerckhove J, Gettemans J, Guillabert A. 2013. *PLoS One* 8: e78108
3. De Clercq S, Zwaenepoel O, Martens E, Vandekerckhove J, Guillabert A, Gettemans J. 2013. *Cell Mol Life Sci.*70, 909-22.