Nanobody toolbox for your research

PRODUCT SPECIFICATION

Recombinant Manduhai anti-human L-plastin nanobody 5 and 9.

Catalogue number: sdAb-Plastin-Nb5-9/Man

Background

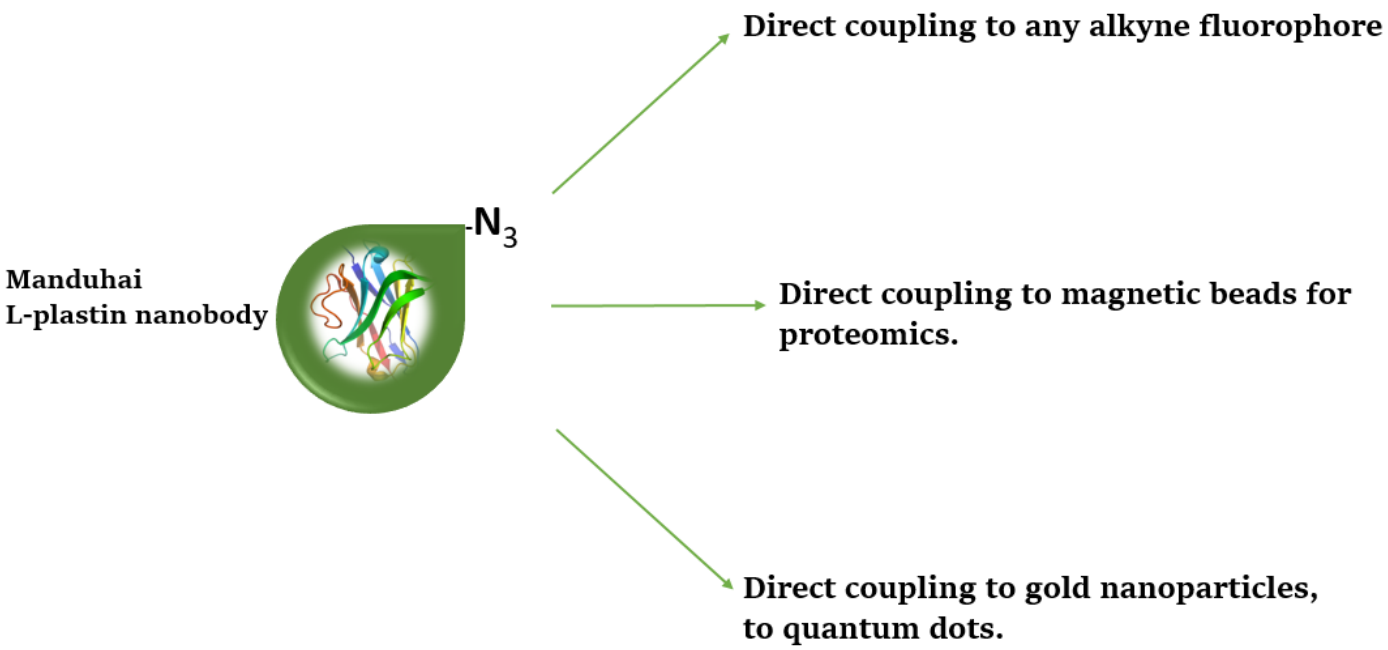
L-plastin is member of a family of actin bundling proteins. Unlike fascin, L-plastin generates actin bundles that are more loosely connected. L-plastin expression is normally restricted to immune cells but is ectopically expressed in tumor cells and contributes to tumor cell invasion.

Nanobody 5 and 9 affect filopodium formation, cell motility, perturb stability of immune cell podosomes and cancer cell invadosomes.

Derivatized L-plastin nanobody for click chemistry

The Manduhai plastin Nanobodies carry a carboxy-terminal *para-azido-Phe residue*, enzymatically inserted. This residue is the same as natural Phe, except that it carries an azido group in its aromatic ring ($-N_3$). As a result, the nanobody is endowed with a singular reactive group, allowing down stream *click chemistry*. *Reproducible and site-specific labeling becomes standard in this way*. Through this modification the antigen binding properties of the nanobody remain unchanged because the carboxy-terminal region of a nanobody is generally not involved in antigen binding.

New possibilities arise for research:



Source and properties

L-plastin nanobody 5 and 9 were raised by immunizing an alpaca with full length human recombinant L-plastin. It binds to L-plastin with an **approximate affinity of 80 nM (determined by ITC)**. L-plastin nanobody 5 interacts with the combined actin binding domains in Lplasti; nanobody 9 interacts with the EF-hands, in the N-terminal region of L-plastin.

Availability: Manduhai Nanobody 5 and 9 come with a COOH-terminal para-Azido-Phe residue. Available in 25 µg, 50 µg, 100 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.

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.