Nanobody toolbox for your research

PRODUCT SPECIFICATION

Recombinant Manduhai anti-human fascin nanobody 2 and 5.

Catalogue number: sdAb-FSC-Nb2-5/Man

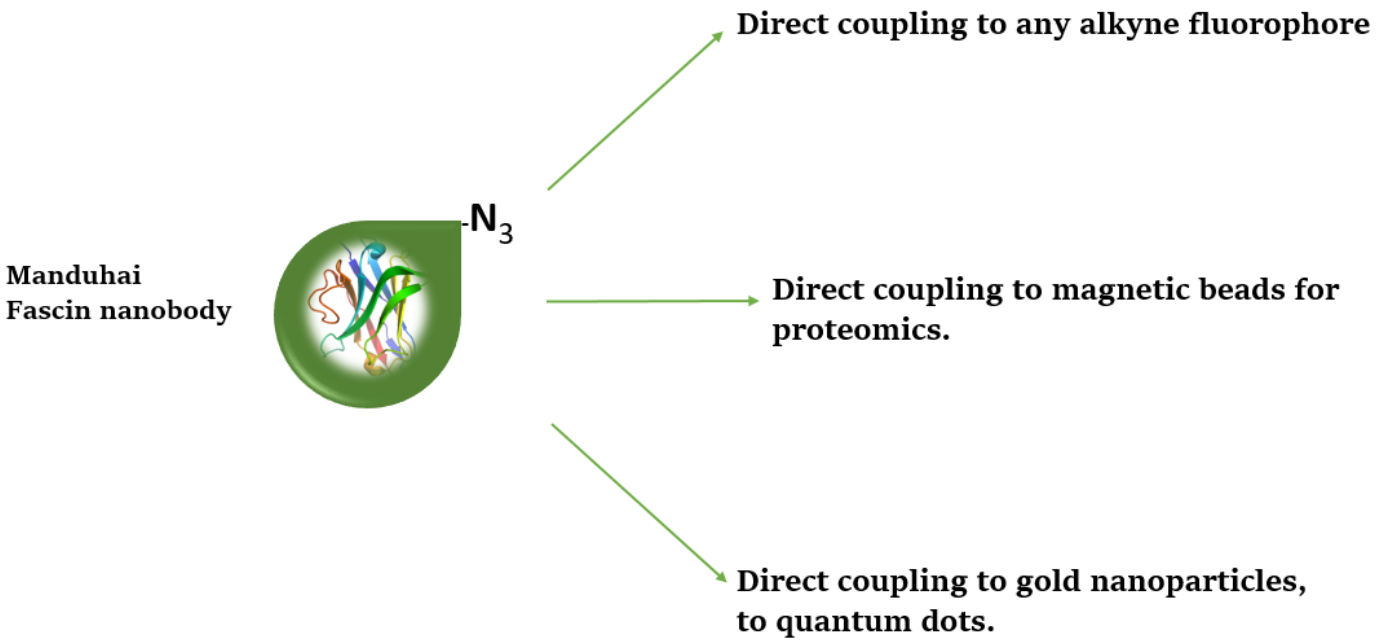
Background

Fascin is a trefoil protein that assembles F-actin filaments into tight bundles. Fascin is a prominent constituent of filopodia and lamellipodia, but also cancer cell invadopodia and immune cell podosomes. Mature invadopodia possess the ability to degrade the extracellular matrix, promoting cancer cell evasion from the tumor. Immune cell podosomes assist cells in migrating through a dense matrix to an area of infection. Fascin expression is altered in a number of cancer cell types and the protein is involved in regulating cell migration and invasion. Moreover, fascin is involved in the process of tumor self seeding and maintaining stemness of the breast cancer stem cell pool. It is considered as a therapeutic target.

Derivatized Fascin nanobody for click chemistry

The Manduhai fascin 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

Fascin Nanobodies were raised by immunizing an alpaca with full length human recombinant fascin-1. **Fascin nanobody 2 does not counteract the bundling activity** of the protein unlike Fascin nanobody 5.

Availability: Manduhai fascin Nanobodies 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 fascin from other species, or with fascin-2, 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, Debeuf N, Boucherie C, Gettemans J. 2015. *Biochim Biophys Acta* 1853: 940-52
2. Van Audenhove I, Boucherie C, Pieters L, Zwaenepoel O, Vanloo B, et al. 2014. *FASEB J* 28: 1805-18
3. Gross C, Wiesmann V, Millen S, Kalmer M, Wittenberg T, et al. 2016. *PLoS Pathog* 12: e1005916