

PRODUCT SPECIFICATION

Recombinant Manduhai anti-mouse Focal adhesion kinase (FAK) nanobody 54.



Catalogue number: sdAb-FAK-Nb54/Man.

Background

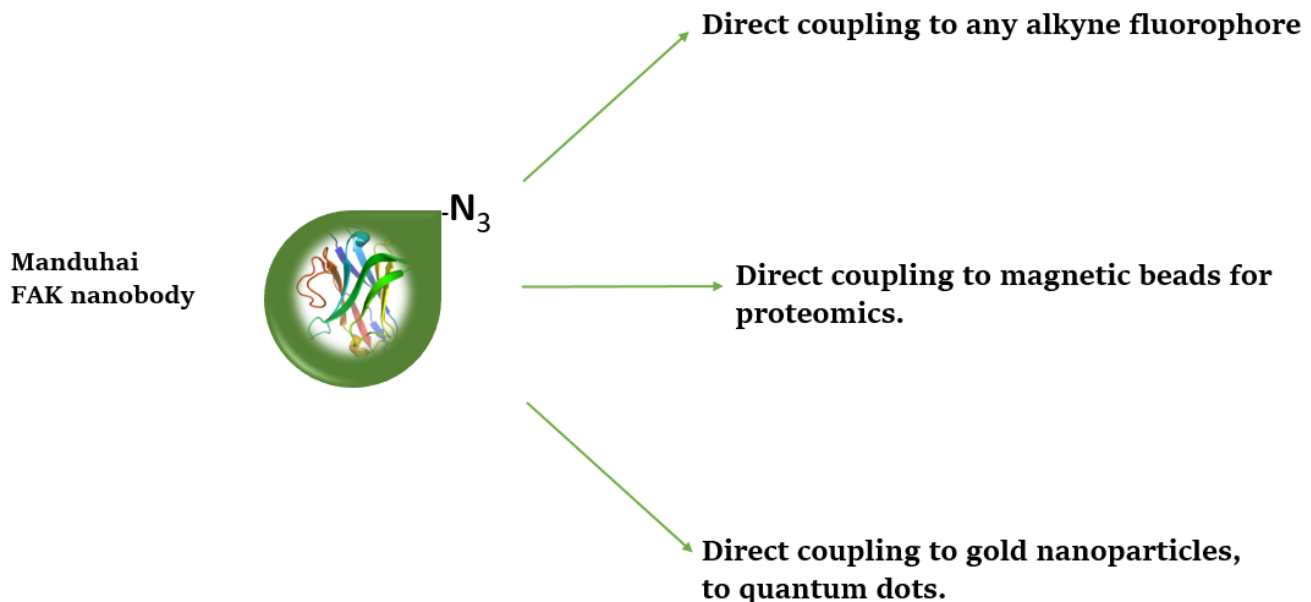
Focal adhesion kinase is a cytosolic (non-receptor) tyrosine kinase of 125 kDa, concentrated in focal adhesions. The FERM (4.1 protein, Ezrin, Radixin, Moesin) and kinase domains form an autoinhibitory association. The FAT domain (focal adhesion targeting domain) directs the kinase to focal adhesions. FAK is found in most cells. FAK promotes cell migration by activating a signaling pathway that induces turn-over of cell contacts with the underlying matrix. During apoptosis, FAK is cleaved by caspase 3 and contributes to loss of focal contacts, cell rounding and formation of blebs. At the organismal level, FAK is required for normal early embryonic development, placenta and heart development. FAK regulates numerous signaling pathways (integrin signal transduction, GPRCs, LDL, netrin receptors).

Substrates: Src kinase, BMX, PIK3R1, PAX, STAT1,...

Derivatized FAK nanobodies for click chemistry

The Manduhai FAK 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 downstream *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

FAK Nanobodies were raised by immunizing a llama with a recombinant FAK protein fragment.

Availability: Manduhai FAK 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 mouse and human FAK has been established. Other species have not yet 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:

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Please enquire about other FAK FAT nanobodies at info@gulliverbiomed.com