

## PRODUCT SPECIFICATION

Recombinant anti-mouse Focal adhesion kinase (FAK) nanobody 80.



Catalogue number: sdAb-FAK-FAT-Nb80.

### 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 turnover 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,...



Model depicting human Focal Adhesion Kinase with its N-terminal FERM domain, central kinase domain and C-terminal FAT domain.

Applications: PD, IP, ELISA. Other applications have not yet been tested. This product is for R&D use only, not for drug, diagnostic, therapeutic, household, or other uses. Not suitable for Western blot. Reacts with human and mouse FAK.

### Source and properties

FAK FERM nanobody 80 was raised by immunizing a llama with a protein fragment encompassing mouse focal adhesion kinase amino acids 1-340. Nb 80 binds to the FERM fragment with a  $K_d$  of  $\sim 1 \times 10^{-9}$  M.

The FAK FERM fragment used for immunization is shown below:

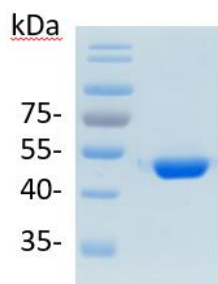


Figure: purified FERM fragment used for immunization. SDS-PAGE (10% gel) followed by Coomassie staining. M = protein standards (kDa).

Availability: FAK FERM nanobody 80 comes with a COOH-terminal HA epitope 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 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, 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:

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