Nanobody toolbox for your research

PRODUCT SPECIFICATION

Recombinant anti-human CapG nanobody 2.

Catalogue number: sdAb-CapG-Nb2

Background

CapG is a typical F-actin capping protein, ubiquitously expressed, with particularly high expression in macrophages. Similar to gelsolin, it binds not only to G-actin but also to the fast growing barbed end of actin filaments, preventing further growth of the actin filament. The interaction requires calcium and is completely reversible by EGTA. CapG expression has been reported to increase in cancer cells. Expression of CapG Nb2 as an intrabody in human breast cancer cells has been reported to strongly prevent lung metastasis of the cancer cells in an orthotopic mouse model.

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

Source and properties

CapG nanobody 2 was raised by immunizing a llama with full length human recombinant CapG. It binds to CapG with an **approximate affinity of 20 nM (determined by ITC). The nanobody binds to Ca^{2+}-activated CapG; no significant binding is observed in the absence of Ca^{2+}.** CapG nanobody 2 interacts with the first domain in CapG.

Availability: Nanobody 2 comes with a COOH-terminal HA or Myc 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 CapG 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 Impe K, Bethuyne J, Cool S, Impens F, Ruano-Gallego D, et al. 2013. *Breast Cancer Res* 15: R116
2. De Clercq S, Boucherie C, Vandekerckhove J, Gettemans J, Guillabert A. 2013. *PLoS One* 8: e78108