

PRODUCT SPECIFICATION

Recombinant anti-human gelsolin nanobody 13.

Catalogue number: sdAb-GSN-Nb13



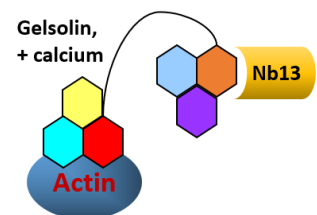
Background

Gelsolin is a ubiquitously expressed cytoskeletal protein and textbook example of an F-actin severing protein. It breaks the non-covalent bonds between actin monomers in a filament and remains bound to the fast growing or capping end of a filament. Gelsolin expression has been reported to fluctuate in cancer cells and this has been linked to altered motility and invasive behavior of cancer cells. Variation in plasma gelsolin levels is thought to reflect different disease states.

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

Gelsolin nanobody 13 was raised by immunizing a llama with full length human recombinant gelsolin. It binds to gelsolin with an **approximate affinity of 10 nM** (determined by ITC) but only when Ca^{2+} is bound to gelsolin. In the absence of Ca^{2+} the affinity is quite low. **Gelsolin nanobody 13 interacts with G4-G5 domains in gelsolin. It recognizes gelsolin that is bound to actin.** The nanobody does not prevent interaction between gelsolin and actin and does not import gelsolin-actin into the nucleus.



Availability: Nanobody 13 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 gelsolin 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 den Abbeele A, De Clercq S, De Ganck A, De Corte V, Van Loo B, et al. 2010. *Cell Mol Life Sci* 67: 1519-35
2. Van Overbeke W, Wongsantichon J, Everaert I, Verhelle A, Zwaenepoel O, et al. 2015. *Hum Mol Genet* 24: 2492-507