

## Anti-Calmodulin-domain protein kinase 1 [VHH-1B7] Standard Size Ab01239-23.9

This chimeric rabbit antibody was made using a variable domain sequence of the original VHH format, for improved compatibility with existing reagents, assays and techniques.

**Isotype and Format:** Rabbit IgG-Fc fusion, His-Tagged

**Clone Number:** VHH-1B7

**Alternative Name(s) of Target:** CDPK1

**UniProt Accession Number of Target Protein:** Q9BJF5

**Published Application(s):** crystallography, immunoprecipitation, ELISA

**Published Species Reactivity:** Toxoplasma gondii

**Immunogen:** VHH phage display libraries from alpacas were pooled and panned against recombinant TgCDPK1, and from this clone 1B7 was selected.

**Specificity:** CDPKs regulate essential processes in parasites. VHH-1B7 recognises CDPK1 in a conformation-dependent manner and selectively inhibits the Ca<sup>2+</sup> bound form. It also recognises CDPK3 in a Ca<sup>2+</sup>-bound form.

**Application Notes:** ELISA showed VHH-1B7 has reactivity against CDPK1. By immunoblot, 1B7 recognized both endogenous and recombinant versions of CDPK1 and its closest paralog CDPK3 (Ingram et al, 2015). Immunoprecipitation showed VHH-1B7 specifically recognises the Ca<sup>2+</sup>-bound form of CDPK1 and CDPK3. VHH-1B7 inhibits CDPK1 and CDPK3 with an IC<sub>50</sub> of approximately 40 nm. The crystal structure of CDPK1 with VHH-1B7 showed VHH-1B7 interacts directly with the regulatory domain of CDPK1.

**Antibody First Published in:** Ingram et al, 2015. Allosteric activation of apicomplexan calcium-dependent protein kinases. Proc Natl Acad Sci U S A. 2015 Sep 8;112(36):E4975-84 [PMID:26305940](#)

**Note on publication:** Describes the purification of VHH-1B7 from the phage library and its characterisation through ELISA, immunoprecipitation, and crystallography.

## Product Form

**Size:** 200 µg Purified antibody.

**Purification:** Purified by Immobilized Metal Affinity Chromatography

**Supplied In:** PBS with 0.02% Proclin 300.

**Storage Recommendation:** Store at 4°C for up to 3 months. For longer storage, aliquot and store at -

20°C.

**Concentration:** 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.