

Anti-Calmodulin-domain protein kinase 1 [VHH-1B7] Standard Size Ab01239-10.9

This chimeric human 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: Human IgG1-Fc fusion

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 Ca²⁺ bound form. It also recognises CDPK3 in a Ca²⁺-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 Ca²⁺-bound form of CDPK1 and CDPK3. VHH-1B7 inhibits CDPK1 and CDPK3 with an IC₅₀ 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.