

# Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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# Anti-Tenuazonic acid (TeA) [3F9] Standard Size Ab04211-23.159

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

**Isotype and Format:** Rabbit IgG-Fc fusion

Clone Number: 3F9

Alternative Name(s) of Target: Nb-3F9; Alternaria mycotoxin tenuazonic acid; (5S)-3-Acetyl-5-[(2S)-

butan-2-yl]-4-hydroxy-1,5-dihydro-2H-pyrrol-2-one **UniProt Accession Number of Target Protein:** 

Published Application(s): bioluminescent enzyme immunoassay, chemiluminescent enzyme

immunoassay, ELISA

Published Species Reactivity: Species independent

**Immunogen:** The original antibody was generated by immunizing a male Bactrian camel with TeA-CMO-KLH followed by antibody library construction and phage display-based selection.

**Specificity:** This antibody is specific for tenuazonic acid, a *Alternaria* mycotoxin. The antibody does not cross-react with AOH, AME, DON, ITeA, and ZEN.

**Application Notes:** The activity and sensitivity of the original format of this antibody (VHH) were assessed by ic-ELISA. Nb-3F9-Nluc, a biofunctional nanobody fusion, was generated and its nanoluciferase catalytic activity, nanobody binding activity, and specific TeA inhibition activity were analyzed. The performance of Nb-3F9-Nluc and the original Nb-3F9 was evaluated using two-step ELISA with HRP-anti-6×His tag secondary antibody. The IC<sub>50</sub> value of ELISA based on Nb-3F9-Nluc was 80.3 ng/mL, and that for Nb-3F9 was 89.5 ng/mL. Additionally, Nb-3F9 and Nb-3F9-Nluc were used, respectively, in the development and optimization of chemiluminescent enzyme immunoassay and bioluminescent enzyme immunoassay (Wang et al., 2020; PMID: 32702970). TeA is a tetrameric acid derivative, and it is considered to have the highest toxicity and exposure among the *Alternaria* toxins. The contamination of TeA in foods has widely been a concern for food safety control.

**Antibody First Published in:** Wang et al. Chemiluminescent Enzyme Immunoassay and Bioluminescent Enzyme Immunoassay for Tenuazonic Acid Mycotoxin by Exploitation of Nanobody and Nanobody-Nanoluciferase Fusion Anal Chem. 2020 Sep 1;92(17):11935-11942. doi: 10.1021/acs.analchem.0c02338 PMID:32702970

Note on publication: The original publication describes the development of highly specific nanobodies

(Nbs), particularly Nb-3F9, against the *Alternaria* mycotoxin tenuazonic acid (TeA) using a stringent biopanning strategy.

#### **Product Form**

**Size:** 100 μg Purified antibody.

**Purification:** Protein A affinity purified **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.