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Produktinformation



Forschungsprodukte & Biochemikalien



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Diagnostik & molekulare Diagnostik



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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Anti-3-Phenoxybenzoic acid [3P5ThC12] Standard Size Ab03224-1.159

Isotype and Format: Mouse IgG1-Fc fusion

Clone Number: 3P5ThC12

Alternative Name(s) of Target: 3-PBA; 3739-38-6; m-Phenoxybenzoic acid; 3-Carboxydiphenyl ether

UniProt Accession Number of Target Protein:

Published Application(s): ELISA

Published Species Reactivity: Species independent

Immunogen: The original antibody was generated by immunizing an alpaca with 3-PBA, followed by antibody library construction and phage display-based selection.

Specificity: The antibody is highly specific and sensitive for 3-PBA and its 4-hydroxylated derivative, 4-hydroxy 3-PBA. The antibody does not cross reacts with 3-Phenoxybenzyl aldehyde, 3-PBA-glycine conjugate, 3-Phenoxybenzyl alcohol, Permethrin, Cypermethrin, Esfenvalerate, Deltamethrin, Cyfluthurin. 3-PBA is a human urinary metabolite of pyrethroid insecticides and can be used as a biomarker to monitor human exposure to these pesticides.

Application Notes: The VHH fragment was employed in an indirect competitive VELISA against 3-PBA, showing an IC₅₀ = 1.4 ng/ml. The performance of the VHH fragment was also evaluated using PELISA, the IC₅₀ value for the VHH was 0.6 ng/ml. Both assays showed a similar tolerance to methanol and dimethylsulfoxide up to 50% in assay buffer. The VELISA and PELISA were used for the immunodetection of 3-PBA in human urine samples (Kim et al., 2012; PMID: 22148739). The VHH fragment was used to construct a VHH-alkaline phosphatase (AP) fusion protein. The fusion protein was used to develop a direct competitive fluorescence enzyme immunoassay for detection of 3-PBA in urine. The cd-FEIA showed 50% inhibitory concentration (IC₅₀) and the linear range of respectively 0.082 and 0.015-0.447 ng/ml, and a detection limit of 0.011 ng/ml (Huo et al., 2018; PMID: 30293433). The VHH fragment was employed to develop a label-free, optical whole-cell Escherichia coli biosensor for the detection of 3-PBA, showing a limit of detection of 3ng/ml (Riangrungrong et al. 2019; PMID: 31462650).

Antibody First Published in: Kim et al. Isolation of alpaca anti-hapten heavy chain single domain antibodies for development of sensitive immunoassay Anal Chem. 2012 Jan 17;84(2):1165-71

[PMID:22148739](#)

Note on publication: The paper describes the generation and characterization of the antibody.

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.