

# MONOCLONAL ANTIBODIES AGAINST FISH PARVALBUMINS



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## BRIEF DESCRIPTION OF A TECHNOLOGY

The new broadly reactive monoclonal antibodies (MAbs) were raised either against natural Atlantic cod parvalbumin or recombinant common carp  $\beta$ -parvalbumin produced in *Escherichia coli* (*E. coli*) cells. Various immunoassays were applied to characterize these MAbs and investigate their reactivity with a large collection of recombinant fish and chicken parvalbumins as well as natural extracts from several fish species and other organisms.

## PURPOSE

Fish is considered as one of the major food allergen source, causing various allergy symptoms and can even lead to anaphylaxis. Different allergy symptoms may occur because of the hidden fish allergens in food, due to cross-contamination during the food production process or incorrect product labelling. Detection of fish allergens in food would improve allergen risk management.

Our newly developed MAbs against fish parvalbumins could be applied for investigation of parvalbumins of fish and other animals and for their detection in allergen extracts or food samples.

## FIELDS OF APPLICATION

MAbs could be applied in different immunassays: enzyme-linked immunosorbent assay (ELISA); western blot; dot blot; immunoprecipitation; lateral flow immunochromatographic assay (LFIA).

## TECHNOLOGY READINESS LEVEL

MAbs validated in laboratory.

## INVENTORS

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## RELEVANT PUBLICATIONS

Sližienė, A., Plečkaitytė, M., Rudokas, V., Juškaitė, K., Žvirblis, G., & Žvirblienė, A. (2023). Cross-reactive monoclonal antibodies against fish parvalbumins as a tool for studying antigenic similarity of different parvalbumins and analysis of fish extracts. *Molecular immunology*, 154, 80–95. <https://doi.org/10.1016/j.molimm.2023.01.001>

## CONTACTS

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