

Product Information

Anti-FXR2 antibody, Mouse monoclonal clone A42, purified from hybridoma cell culture

Catalog Number **F1554**

Product Description

Monoclonal Anti-FXR2 (mouse IgG1 isotype) is derived from the hybridoma A42 produced by the fusion of mouse myeloma cells (NS1 cells) and splenocytes from BALB/c mice immunized with human FXR2 recombinant protein.¹ The isotype is determined by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2.

Monoclonal Anti-FXR2 recognizes human,^{1,2} monkey, bovine, canine, rat, hamster, and mouse^{1,2} FXR2, ~74 kDa, and does not crossreact with FMR or FXR1.¹ The antibody may be used in immunoblotting,^{1,2} immunoprecipitation,¹ immunocytochemistry,^{1,2} and immunohistochemistry.²

One out of 4,000 males and one out of 6,000 females suffer from the fragile X syndrome that is an inherited mental disease. Fragile X syndrome is characterized by mental retardation, macroorchidism, typical facial appearance, and various degrees of autistic behavior. This syndrome is caused by the expansion of highly polymorphic CGG repeats present in the untranslated region of the FMR1 gene (also known as FMRP).¹⁻³ As a consequence, the promoter of the gene is hypermethylated and the gene FMR1 is not transcribed.

This protein can bind to RNA. It contains two heterogeneous nuclear ribonucleoprotein K homology (KH) domains and one RGG box. Two proteins named FXR1 and FXR2 interact with FMR1. Both proteins have 60% amino acid identity to FMR1 and both have two KH domains and one RGG box that together with FMR1 bind to RNA. FXR2 gene is located on human chromosome 17 and its protein is localized mainly in the cytoplasm.

The protein is highly expressed in brain and testis.¹⁻³ FXR2 knockout mice are hyperactive in the open-field test, impaired on the rotarod test, have reduced levels of prepulse inhibition, display less contextual conditioned fear, are impaired at locating the hidden platform in the Morris water task, and less sensitive to heat stimulus.

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: ~2 mg/ml

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For prolonged storage, freeze in working aliquots. Repeated freezing and thawing, or storage in frost-free freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody concentration of 2–4 µg/ml is recommended using total cell extract of HEK 293T cells.

Note: In order to obtain the best results in various techniques and preparations, it is recommended to determine the optimal working dilution by titration.

References

1. Zhang, Y. et al., EMBO J., **14**, 5358-5366 (1995).
2. Tamanini, F. et al., Hum. Mol. Gen., **6**, 1315-1322 (1997).
3. Siomi, M.C. et al., Mol. Cell. Biol., **16**, 3825-3832 (1996).
4. Bontekoe, C.J.M. et al., Hum. Mol. Gen., **11**, 487-498 (2002).

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