# Anti-FMR1 Antibody

**Alternative Names:** FMRP, FRAXA, POF, POF1, Synaptic functional regulator FMR1, Fragile X Mental Retardation 1

**Catalogue Number:** AB18-10051

**Size:** 100ug

## Background Information

Fragile X Mental Retardation 1 (FRM1) is an RNA binding protein that plays a central role in neuronal development and synaptic plasticity through the regulation of alternative mRNA splicing, mRNA stability, mRNA dendritic transport and postsynaptic local protein synthesis of a subset of mRNAs. A trinucleotide repeat (CGG) in the gene encoding this protein is normally found at 6-53 copies, but an expansion to 55-230 repeats is the cause of fragile X syndrome. Expansion of the trinucleotide repeat may also cause one form of premature ovarian failure (POF1). Multiple alternatively spliced transcript variants that encode different protein isoforms and which are located in different cellular locations have also been described for this gene.

FRM1 has been shown to play a translation-independent role in the modulation of presynaptic action potential (AP) duration and neurotransmitter release via large-conductance calcium-activated potassium (BK) channels in hippocampal and cortical excitatory neurons [1]. FMR1 may be involved in the control of DNA damage response (DDR) mechanisms through the regulation of ATR-dependent signaling pathways such as histone H2AFX/H2A.x and BRCA1 phosphorylations [2].

## Product Information

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| **Antibody Type:** | Polyclonal | **Host:** | Rabbit |
| **Isotype:** | IgG | **Species Reactivity:** | Human Mouse Rat |
| **Immunogen:** | Recombinant human FMR1 | | |
| **Format:** | 100 µg in 100 µl PBS containing 0.02% sodium azide. | | |
| **Storage Conditions:** | 6 months: 4˚C. Long-term storage: -20˚C. Avoid multiple freeze and thaw cycles. | | |
| **Applications:** | WB IHC IF | WB 1:500-2000. IHC 1:50-200. IF 1:50-200. | |

## Additional Information

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| **Subcellular location:** | Cytoplasm, Nucleus, nucleolus | **MW:** | 71kDa |
| **Gene ID** | 2332 | **Uniprot ID:** | Q06787 |

## References

1. Myrick L.K. et al. Proc. Natl. Acad. Sci. U.S.A. 112:949-956(2015),

2. Alpatov R. et al Cell 157:869-881(2014)