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Phospho-Ser499 FMRP (Fragile X Mental Retardation Protein) Antibody

Affinity purified rabbit polyclonal antibody
Catalog # AN1228

Specification

Phospho-Ser499 FMRP (Fragile X Mental Retardation Protein) Antibody - Product Information

Application	**WB**
Primary Accession	Q80WE1
Reactivity	**Rat**
Predicted	**Bovine, Chicken, Human, Mouse, Monkey, Xenopus, Zebrafish**
Host	**Rabbit**
Clonality	**polyclonal**
Calculated MW	**71 KDa**

Phospho-Ser499 FMRP (Fragile X Mental Retardation Protein) Antibody - Additional Information

Gene ID	**24948**
Gene Name	**FMR1**

Other Names
Fragile X mental retardation protein 1 homolog, FMRP, Protein FMR-1, Fmr1

Target/Specificity
Synthetic phospho-peptide corresponding to amino acid residues surrounding Ser499 conjugated to KLH.

Dilution
WB~~ 1:1000

Format
Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.

Antibody Specificity
Specific for ~71k FMRP protein phosphorylated at Ser499. Immunolabeling of the FMRP protein is completely eliminated by lambda-phosphatase.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Phospho-Ser499 FMRP (Fragile X Mental Retardation Protein) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping
Blue Ice

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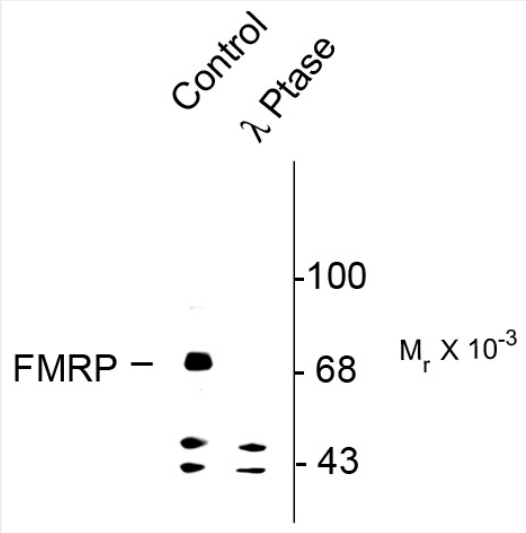
Phospho-Ser499 FMRP (Fragile X Mental Retardation Protein) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Phospho-Ser499 FMRP (Fragile X Mental Retardation Protein) Antibody - Images



Western blot of rat hippocampal lysate showing specific immunolabeling of the ~71k FMRPprotein phosphorylated at Ser499 (Control). The phosphospecificity of this labeling is shown inthe second lane (lambda-phosphatase: λ-Ptase). The blot is identical to the control exceptthat the lysate was incubated in λ-Ptase (400 units/100ul lysate for 30 min) before being exposedto the FMRP Ser499 antibody. The immunolabeling is completely eliminated by treatment with λ-Ptase.

Phospho-Ser499 FMRP (Fragile X Mental Retardation Protein) Antibody - Background

Fragile X Mental Retardation Protein (FMRP) is an RNA-binding protein that plays an essential role in cognitive brain function. Mutations in the FMR1 gene, which codes for FMRP, can result in fragile X syndrome, autism, as well as other cognitive deficits (Brown et al.,1998, Goodlin-Jones et al., 2004). Phosphorylation of the highly conserved Ser499 has been shown to trigger hierarchical phosphorylation of nearby serines and may play a role in suppressing target mRNA translation (Ceman et al., 2003, Narayanan et al. 2008).

Phospho-Ser499 FMRP (Fragile X Mental Retardation Protein) Antibody - References

Bernard PB, Castano AM, O'Leary H, Simpson K, Browning MD, Benke TA. (2013) Phosphorylation of FMRP and alterations of FMRP complex underlie enhanced mLTD in adult rats triggered by early life seizures. Neurobiol Dis. Nov; 59:1-17.
Brown V, Small K, Lakkis L, Feng Y, Gunter C, Wilkinson KD, Warren ST (1998) Purified recombinant

Fmrp exhibits selective RNA binding as an intrinsic property of the fragile X mental retardation protein. J Biol Chem 273:15521–15527
Ceman S, O'Donnell WT, Reed M, Patton S, Pohl J, Warren ST. (2003) Phosphorylation influences the translation state of FMRP-associated polyribosomes. Hum Mol Genet. Dec 15;12(24):3295-305
Goodlin-Jones BL, Tassone F, Gane LW, Hagerman RJ. (2004) Autistic spectrum disorder and the fragile X premutation. J Dev Behav Pediatr. Dec;25(6):392-8
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