#12295 Store at -20°C

FXR1 (D10A2) XP® Rabbit mAb

☐ Small 100 µl
(10 western blots)

☐ Petite 40 µl
(4 western blots)

Cell Signaling TECHNOLOGY®

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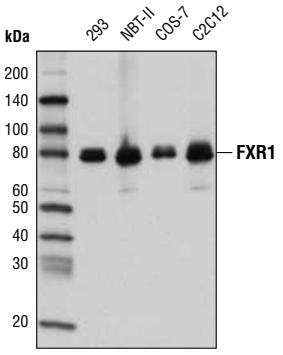
For Research Use Only. Not For Use In Diagnostic Procedures.

Entrez-Gene ID #8087
UniProt ID #P51114

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IF-IC Endogenous	H, M, R, Mk	78-80, 82-84 kDa	Rabbit IgG**

Background: Fragile X syndrome is a genetic disorder characterized by a spectrum of physical and behavioral features and is a frequent form of inherited mental retardation (1). X-linked FMRP (FMR-1) and its two autosomal homologs, FXR1 and FXR2, are polyribosome-associated RNA-binding proteins that are involved in the pathogenesis of fragile X syndrome (1-3). Each of the fragile X proteins can self-associate, as well as form heteromers with the other two related proteins (3). FMRP can act as a translation regulator and is a component of RNAi effector complexes (RISC), suggesting a role in gene silencing (4). The *Drosophila* homolog of FMRP (dFMRP) associates with Argonaute 2 (Ago2) and Dicer and can coimmunoprecipitate with miRNA and siRNA (5). These results suggest that fragile X syndrome is related to abnormal translation caused by defects in RNAi-related pathways. In addition, FMRP, FXR1, and FXR2 are components of stress granules (SG) and have been implicated in the translational regulation of mRNAs (6).

Specificity/Sensitivity: FXR1 (D10A2) XP® Rabbit mAb recognizes endogenous levels of total FXR1 protein.



Western blot analysis of extracts from various cell lines using FXR1 (D10A2) XP® Rabbit mAb.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly574 of human FXR1 protein.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. *Do not aliquot the antibody.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunofluorescence (IF-IC)	1:50

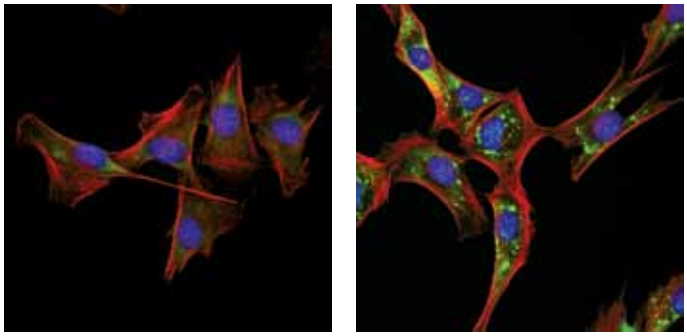
For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

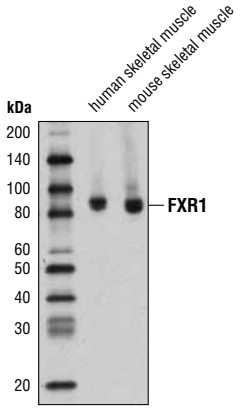
Background References:

(1) Verkerk, A.J. et al. (1991) *Cell* 65, 905-14.
(2) Siomi, M.C. et al. (1995) *EMBO J* 14, 2401-8.
(3) Zhang, Y. et al. (1995) *EMBO J* 14, 5358-66.
(4) Caudy, A.A. et al. (2002) *Genes Dev* 16, 2491-6.
(5) Siomi, H. et al. (2004) *Ment Retard Dev Disabil Res Rev* 10, 68-74.
(6) Linder, B. et al. (2008) *Hum Mol Genet* 17, 3236-46.

Untreated **MG-132-treated**



Confocal immunofluorescent analysis of C2C12 cells, untreated (left) or MG-132 treated (10 µg/mL, 3 hr; right), using FXR1 (D10A2) XP® Rabbit mAb (green). Actin filaments were labeled with DyLight™ 554 Phalloidin #13054 (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).



Western blot analysis of extracts from human and mouse skeletal muscle tissues using FXR1 (D10A2) XP® Rabbit mAb.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide

Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.