

FXR1 (H-57): sc-48783

BACKGROUND

Fragile X syndrome is the most frequent form of inherited mental retardation and is the result of transcriptional silencing of the FMR1 gene on the X chromosome. The FMR1 gene contains a distinct CpG dinucleotide repeat located in the 5' untranslated region of the gene, and in the fragile X syndrome this tandem repeat is substantially amplified, and subjected to extensive methylation and enhanced transcriptional silencing. The FMR1 protein (or FMRP) is an RNA-binding protein that associates with polyribosomes and is a likely component of a messenger ribonuclear protein (mRNP) particle. FMR1 contains several features that are characteristics of RNA-binding proteins, including two hnRNPK homology (KH) domains and an RGG amino acid motif (RGG box). FMR1 can also interact with two fragile X syndrome related factors, FXR1 and FXR2, and these proteins form heterodimers through their N-terminal coil-coiled domains. FMR1 localizes to both the nucleus and the cytoplasm, and since it contains both a nuclear localization signal and a nuclear export signal it is also implicated in the nucleo-cytoplasmic transport of mRNAs.

REFERENCES

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2. Pieretti, M., et al. 1991. Absence of expression of the FMR1 gene in fragile X syndrome. *Cell* 66: 817-822.
3. Matunis, M.J., et al. 1992. Characterization and primary structure of the poly(C)-binding heterogeneous nuclear ribonucleoprotein complex K protein. *Mol. Cell. Biol.* 12: 164-171.
4. De Boulle, K., et al. 1993. A point mutation in the FMR1 gene associated with fragile X mental retardation. *Nat. Genet.* 3: 31-35.
5. Zhang, Y., et al. 1995. The fragile X mental retardation syndrome protein interacts with novel homologs FXR1 and FXR2. *EMBO J.* 14: 5358-5366.
6. Eberhart, D.E., et al. 1996. The fragile X mental retardation protein is a ribonucleoprotein containing both nuclear localization and nuclear export signals. *Hum. Mol. Genet.* 5: 1083-1091.

CHROMOSOMAL LOCATION

Genetic locus: FXR1 (human) mapping to 3q26.33; Fxr1h (mouse) mapping to 3 A3.

SOURCE

FXR1 (H-57) is a rabbit polyclonal antibody raised against amino acids 552-608 mapping at the C-terminus of FXR1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

FXR1 (H-57) is recommended for detection of FXR1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

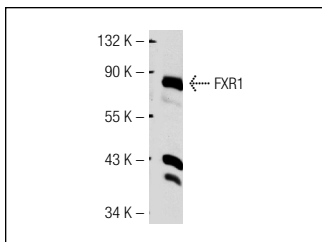
FXR1 (H-57) is also recommended for detection of FXR1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for FXR1 siRNA (h): sc-35423, FXR1 siRNA (m): sc-35424, FXR1 shRNA Plasmid (h): sc-35423-SH, FXR1 shRNA Plasmid (m): sc-35424-SH, FXR1 shRNA (h) Lentiviral Particles: sc-35423-V and FXR1 shRNA (m) Lentiviral Particles: sc-35424-V.

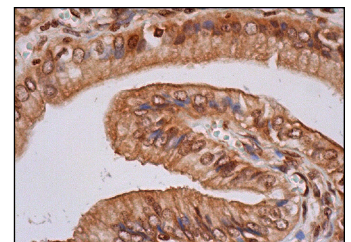
Molecular Weight of FXR1: 78 kDa.

Positive Controls: F9 cell lysate: sc-2245 or MCF7 whole cell lysate: sc-2206.

DATA



FXR1 (H-57): sc-48783. Western blot analysis of FXR1 expression in F9 whole cell lysate.



FXR1 (H-57): sc-48783. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing nuclear and cytoplasmic staining of glandular cells.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **FXR1 (B-2): sc-374148** or **FXR1 (C-4): sc-515398**, our highly recommended monoclonal alternatives to FXR1 (H-57). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **FXR1 (B-2): sc-374148**.