

# MER3 (T-15): sc-164984

## BACKGROUND

MER3, also known as HFM1, Si-11 or SEC3D1 (SEC63 domain-containing protein 1), is a 1,435 amino acid protein that belongs to the helicase family and SKI2 subfamily. MER3 catalyzes the conversion of ATP to ADP, and contains one helicase ATP-binding domain, a helicase C-terminal domain and a single SEC63 domain. Existing as two alternatively spliced isoforms, MER3 is expressed in testis and ovary and is encoded by a gene that maps to human chromosome 1p22.2. Human chromosome 1 spans 260 million base pairs, contains over 3,000 genes, comprises nearly 8% of the human genome and houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome.

## REFERENCES

1. Eudy, J.D., et al. 1998. Mutation of a gene encoding a protein with extracellular matrix motifs in Usher syndrome type IIa. *Science* 280: 1753-1757.
2. Tayebi, N., et al. 2001. Gaucher disease and parkinsonism: a phenotypic and genotypic characterization. *Mol. Genet. Metab.* 73: 313-321.
3. Plasilova, M., et al. 2004. Exclusion of an extracolonic disease modifier locus on chromosome 1p33-36 in a large Swiss familial adenomatous polyposis kindred. *Eur. J. Hum. Genet.* 12: 365-371.
4. Tanaka, K., et al. 2006. HFM1, the human homologue of yeast Mer3, encodes a putative DNA helicase expressed specifically in germ-line cells. *DNA Seq.* 17: 242-246.
5. Betarbet, R., et al. 2008. Fas-associated factor 1 and Parkinson's disease. *Neurobiol. Dis.* 31: 309-315.

## CHROMOSOMAL LOCATION

Genetic locus: HFM1 (human) mapping to 1p22.2; Hfm1 (mouse) mapping to 5 E5.

## SOURCE

MER3 (T-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MER3 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.

Blocking peptide available for competition studies, sc-164984 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## RESEARCH USE

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

## APPLICATIONS

MER3 (T-15) is recommended for detection of MER3 of human origin and Hfm1 of mouse 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MER3 (T-15) is also recommended for detection of MER3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for MER3 siRNA (h): sc-88755, Hfm1 siRNA (m): sc-145952, MER3 shRNA Plasmid (h): sc-88755-SH, Hfm1 shRNA Plasmid (m): sc-145952-SH, MER3 shRNA (h) Lentiviral Particles: sc-88755-V and Hfm1 shRNA (m) Lentiviral Particles: sc-145952-V.

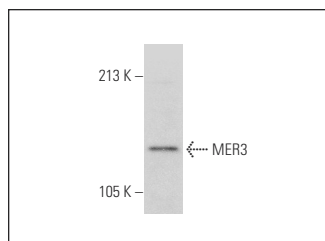
Molecular Weight of MER3 isoforms: 163/63 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



MER3 (T-15): sc-164984. Western blot analysis of MER3 expression in Jurkat whole cell lysate.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **MER3 (C-8): sc-514597**, our highly recommended monoclonal alternative to MER3 (T-15).