

# MAIP1 (D-12): sc-390662

## BACKGROUND

Chromosome 2, the second largest human chromosome, consists of 237 million bases encoding over 1,400 genes, comprising approximately 8% of the human genome. A number of genetic diseases are linked to genes on chromosome 2. Harlequin ichthyosis, a rare and morbid skin deformity, is associated with mutations in the ABCA12 gene. The lipid metabolic disorder sitosterolemia is associated with ABCG5 and ABCG8. An extremely rare recessive genetic disorder, Alström syndrome is due to mutations in the ALMS1 gene. Interestingly, chromosome 2 contains what appears to be a vestigial second centromere and vestigial telomeres, which gives credence to the hypothesis that human chromosome 2 is the result of an ancient fusion of two ancestral chromosomes seen in modern form today in apes.

## REFERENCES

1. Ijdo, J.W., et al. 1991. Origin of human chromosome 2: an ancestral telomere-telomere fusion. *Proc. Natl. Acad. Sci. USA* 88: 9051-9055.
2. Avarello, R., et al. 1992. Evidence for an ancestral alphoid domain on the long arm of human chromosome 2. *Hum. Genet.* 89: 247-249.
3. Hillier, L.W., et al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. *Nature* 434: 724-731.
4. Thomas, A.C., et al. 2006. ABCA12 is the major harlequin ichthyosis gene. *J. Invest. Dermatol.* 126: 2408-2413.
5. Akiyama, M., et al. 2007. Compound heterozygous ABCA12 mutations including a novel nonsense mutation underlie harlequin ichthyosis. *Dermatology* 215: 155-159.

## CHROMOSOMAL LOCATION

Genetic locus: MAIP1 (human) mapping to 2q33.1; Maip1 (mouse) mapping to 1 C1.3.

## SOURCE

MAIP1 (D-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 248-276 of MAIP1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MAIP1 (D-12) is available conjugated to agarose (sc-390662 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390662 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390662 PE), fluorescein (sc-390662 FITC), Alexa Fluor® 488 (sc-390662 AF488), Alexa Fluor® 546 (sc-390662 AF546), Alexa Fluor® 594 (sc-390662 AF594) or Alexa Fluor® 647 (sc-390662 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390662 AF680) or Alexa Fluor® 790 (sc-390662 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390662 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

MAIP1 (D-12) is recommended for detection of MAIP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

MAIP1 (D-12) is also recommended for detection of MAIP1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for MAIP1 siRNA (h): sc-94540, MAIP1 siRNA (m): sc-140550, MAIP1 shRNA Plasmid (h): sc-94540-SH, MAIP1 shRNA Plasmid (m): sc-140550-SH, MAIP1 shRNA (h) Lentiviral Particles: sc-94540-V and MAIP1 shRNA (m) Lentiviral Particles: sc-140550-V.

Molecular Weight of MAIP1: 33 kDa.

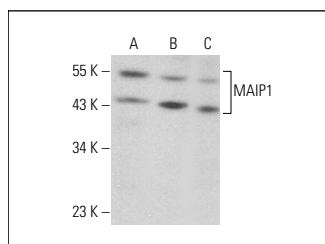
Positive Controls: MAIP1 (m): 293T Lysate: sc-118080, HEK293 whole cell lysate: sc-45136 or COLO 205 whole cell lysate: sc-364177.

## RECOMMENDED SUPPORT REAGENTS

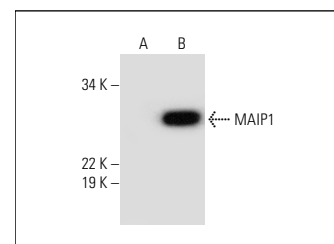
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



MAIP1 (D-12): sc-390662. Western blot analysis of MAIP1 expression in COLO 205 (A), HEK293 (B) and NIH/3T3 (C) whole cell lysates.



MAIP1 (D-12): sc-390662. Western blot analysis of MAIP1 expression in non-transfected: sc-117752 (A) and mouse MAIP1 transfected: sc-118080 (B) 293T whole cell lysates.

## 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.