

NRAMP 1 (D-9): sc-398036

BACKGROUND

Natural resistance associated macrophage proteins (NRAMPs) belong to a super-family of highly conserved integral membrane proteins. NRAMP 1 is an intracellular macrophage protein located at the phagosomal membrane where it functions as a divalent cation transporter for Fe^{2+} , Zn^{2+} and Mn^{2+} . NRAMP 1 is a pH-dependent antiporter that transports metal ions either into or out of the phagosome against a proton gradient. In humans, polymorphisms in the NRAMP 1 gene are linked to susceptibility to *M. tuberculosis* and leprosy. NRAMP 2 is another divalent cation transporter ubiquitously expressed as two splice variants, which are distinguished by the presence (isoform 1) or absence (isoform 2) of an iron response element. In the duodenum of the small intestine, dietary iron regulates NRAMP 2 expression at the brush border. Mutations in the gene for NRAMP 2 in mice and rats result in severe anemia.

REFERENCES

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8. Cervino, A.C., et al. 2000. Allelic association between the NRAMP1 gene and susceptibility to tuberculosis in Guinea-Conakry. *Ann. Hum. Genet.* 64: 507-512.
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CHROMOSOMAL LOCATION

Genetic locus: SLC11A1 (human) mapping to 2q35, SLC11A2 (human) mapping to 12q13.12; Slc11a1 (mouse) mapping to 1 C3, Slc11a2 (mouse) mapping to 15 F1.

SOURCE

NRAMP 1 (D-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 71-98 within an internal region of NRAMP 1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

NRAMP 1 (D-9) is recommended for detection of NRAMP 1 and NRAMP 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

NRAMP 1 (D-9) is also recommended for detection of NRAMP 1 and NRAMP 2 in additional species, including equine, canine and bovine.

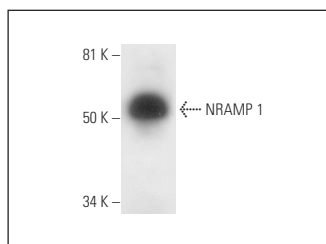
Molecular Weight of NRAMP 1: 65 kDa.

Positive Controls: U-937 cell lysate: sc-2239.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



NRAMP 1 (D-9): sc-398036. Western blot analysis of NRAMP 1 expression in U-937 whole cell lysate.

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.

PROTOCOLS

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