

# Imp4 (G-20): sc-243074

## BACKGROUND

Imp4, also known as U3 small nucleolar ribonucleoprotein protein Imp4 or BXDC4, is a 291 amino acid protein that contains one Brix domain. Localized in the nucleus, Imp4 exists as a component of a heterotrimeric complex containing Imp3, Imp4 and MPP10. Imp4 also exists as a component of the 60-80S U3 small nucleolar ribonucleoprotein and plays a key role in early cleavages during pre-18S ribosomal RNA processing. The gene encoding Imp4 maps to human chromosome 2 which, as the second largest human chromosome, makes up approximately 8% of the human genome and contains 237 million bases encoding over 1,400 genes. A number of genetic diseases are linked to genes on chromosome 2 including Harlequin ichthyosis, Alström syndrome and the lipid metabolic disorder sitosterolemia.

## REFERENCES

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- Beltrame, M. and Tollervey, D. 1995. Base pairing between U3 and the pre-ribosomal RNA is required for 18S rRNA synthesis. *EMBO J.* 14: 4350-4356.
- Baserga, S.J., Agentis, T.M., Wormsley, S., Dunbar, D.A. and Lee, S. 1997. Mpp10p, a new protein component of the U3 snoRNP required for processing of 18S rRNA precursors. *Nucleic Acids Symp. Ser.* 36: 64-67.
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- Granneman, S., et al. 2003. The human Imp3 and Imp4 proteins form a ternary complex with hMpp10, which only interacts with the U3 snoRNA in 60-80S ribonucleoprotein complexes. *Nucleic Acids Res.* 31: 1877-1887.

## CHROMOSOMAL LOCATION

Genetic locus: IMP4 (human) mapping to 2q21.1; Imp4 (mouse) mapping to 1 B.

## SOURCE

Imp4 (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Imp4 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-243074 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Imp4 (G-20) is recommended for detection of Imp4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Imp4 (G-20) is also recommended for detection of Imp4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Imp4 siRNA (h): sc-94624, Imp4 siRNA (m): sc-146227, Imp4 shRNA Plasmid (h): sc-94624-SH, Imp4 shRNA Plasmid (m): sc-146227-SH, Imp4 shRNA (h) Lentiviral Particles: sc-94624-V and Imp4 shRNA (m) Lentiviral Particles: sc-146227-V.

Molecular Weight of Imp4: 34 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, K-562 nuclear extract: sc-2130 or Jurkat nuclear extract: sc-2132.

## 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) 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.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.