

# IMP-3 (N-19): sc-47893

## BACKGROUND

IGF-II mRNA-binding proteins (IMPs) bind RNA and influence RNA synthesis and metabolism. IMP-1, also known as coding region determinant-binding protein/insulin-like growth factor II mRNA-binding protein (CRD-BP) and VICKZ1, IMP-2 (IMP2, VICKZ2, p62) and IMP-3 (KOC1, VICKZ3) contain a unique combination of RNA recognition motifs and four hnRNP K homology domains. IMP-1 is abundant in embryonal tissues and is expressed in 81% of colon cancers, 73% of sarcomas and 58.5% of breast cancers. It recognizes c-Myc, IGF-II and  $\tau$  mRNAs, and H19 RNA, and plays a major role in proliferation of K-562 cells by an IGF-II-dependent mechanism. IMP-2 binds the 5' UTR of IGF-II mRNA and influences tumor cell growth, in which IMP-2 is associated with apoptosis induced by tretinoin. IMP-3 knockdown by RNA interference decreases levels of IGF-II protein without affecting IGF-II, c-Myc or  $\beta$  actin mRNA and H19 RNA levels. IMP-3 is a marker for carcinomas and high-grade dysplastic lesions of pancreatic ductal epithelium.

## CHROMOSOMAL LOCATION

Genetic locus: IGF2BP3 (human) mapping to 7p15.3; Igf2bp3 (mouse) mapping to 6 B2.3.

## SOURCE

IMP-3 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of IMP-3 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-47893 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

IMP-3 (N-19) is recommended for detection of IMP-3 of human and, to a lesser extent, mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

IMP-3 (N-19) is also recommended for detection of IMP-3 in additional species, including equine.

Suitable for use as control antibody for IMP-3 siRNA (h): sc-60846, IMP-3 siRNA (m): sc-60847, IMP-3 shRNA Plasmid (h): sc-60846-SH, IMP-3 shRNA Plasmid (m): sc-60847-SH, IMP-3 shRNA (h) Lentiviral Particles: sc-60846-V and IMP-3 shRNA (m) Lentiviral Particles: sc-60847-V.

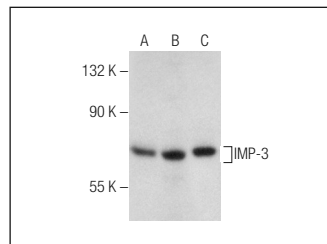
Molecular Weight of IMP-3: 69 kDa.

Positive Controls: NTERA-2 cl.D1 cell lysate: sc-364181, RD whole cell lysate: sc-364791 or K-562 whole cell lysate: sc-2203.

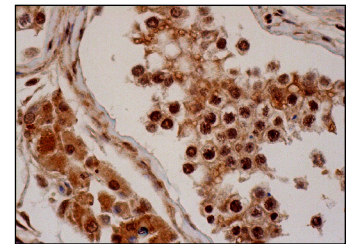
## RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



IMP-3 (N-19): sc-47893. Western blot analysis of IMP-3 expression in NTERA-2 cl.D1 (A), K-562 (B) and RD (C) whole cell lysates.



IMP-3 (N-19): sc-47893. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear and cytoplasmic staining of cells in seminiferous ducts and Leydig cells.

## SELECT PRODUCT CITATIONS

- Li, H., et al. 2009. Identification of mRNA binding proteins that regulate the stability of LDL receptor mRNA through AU-rich elements. *J. Lipid Res.* 50: 820-831.
- Rivera Vargas, T., et al. 2013. Post-transcriptional regulation of cyclins D1, D3 and G<sub>1</sub> and proliferation of human cancer cells depend on IMP-3 nuclear localization. *Oncogene* 33: 2866-2875.

## 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.

**MONOS**  
Satisfaction  
Guaranteed

Try **IMP-3 (E-2): sc-365640** or **IMP-3 (C-11): sc-365641**, our highly recommended monoclonal alternatives to IMP-3 (N-19).