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 VICK21; IMP-2 (IMP2, VICK22, p62); and IMP-3 (KOC1, VICK23) 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 τ 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 β actin mRNA and H19 RNA levels. IMP-3 is a marker for carcinomas and high-grade dysplastic lesions of pancreatic ductal epithelium.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: IGF2BP3 (human) mapping to 7p15.3.

SOURCE

IMP-3 (G-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 149-180 near the N-terminus of IMP-3 of human origin.

PRODUCT

Each vial contains 200 μg IgG2a kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-376067 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

IMP-3 (G-9) is recommended for detection of IMP-3 of 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).

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

Molecular Weight of IMP-3: 69 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or IMP-3 (h): 293T Lysate: sc-117068.

RECOMMENDED SUPPORT REAGENTS

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

DATA

IMP-3 (G-9): sc-376067. Western blot analysis of IMP-3 expression in non-transfected 293T: sc-117752 (A), human IMP-3 transfected 293T: sc-117068 (B) and K-562 (C) 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.

PROTOCOLS

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