

BAMBI (3B7): sc-100681

BACKGROUND

BAMBI (BMP and activin membrane-bound inhibitor homolog), also designated non-metastatic gene A (NMA) protein, is a membrane-spanning glycoprotein that acts as a negative regulator of TGF β signaling during development. The BAMBI family of proteins are related to the type I TGF β receptor family, however, BAMBI is a pseudoreceptor that lacks an intracellular serine/threonine kinase domain. BAMBI transcription regulation is under the influence of β -catenin, BMP, Smad3 and Smad4. BAMBI expression can increase in colorectal and hepatocellular carcinomas relative to non-cancerous tissues. BAMBI is expressed at high levels during odontogenesis. It is coexpressed with BMP-4 during early *Xenopus* embryogenesis and can be detected in poorly metastatic human melanoma cell lines.

REFERENCES

- Polushkin, B.V. 1968. On the significance of mast cells in the calcification of tissues during calciphylaxis. *Ark. Patol.* 30: 45-49.
- Knight, C., et al. 2001. Cloning, characterization, and tissue expression pattern of mouse NMA/BAMBI during odontogenesis. *J. Dent. Res.* 80: 1895-1902.
- Grotewold, L., et al. 2001. BAMBI is coexpressed with BMP-4 during mouse embryogenesis. *Mech. Dev.* 100: 327-330.
- Loveland, K.L., et al. 2003. Expression of BAMBI is wide-spread in juvenile and adult rat tissues and is regulated in male germ cells. *Endocrinology* 144: 4180-4186.
- Sekiya, T., et al. 2004. Identification of BMP and activin membrane-bound inhibitor (BAMBI), an inhibitor of transforming growth factor- β signaling, as a target of the β -catenin pathway in colorectal tumor cells. *J. Biol. Chem.* 279: 6840-6846.
- Sekiya, T., et al. 2004. Transcriptional regulation of signaling. *Biochem. Biophys. Res. Commun.* 320: 680-684.
- Zuzarte-Luís, V., et al. 2004. A new role for BMP5 during limb development acting through the synergic activation of Smad and MAPK pathways. *Dev. Biol.* 272: 39-52.

CHROMOSOMAL LOCATION

Genetic locus: BAMBI (human) mapping to 10p12.1.

SOURCE

BAMBI (3B7) is a mouse monoclonal antibody raised against recombinant BAMBI of human origin.

PRODUCT

Each vial contains 100 μ g IgG γ_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

BAMBI (3B7) is recommended for detection of BAMBI of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for BAMBI siRNA (h): sc-60243, BAMBI shRNA Plasmid (h): sc-60243-SH and BAMBI shRNA (h) Lentiviral Particles: sc-60243-V.

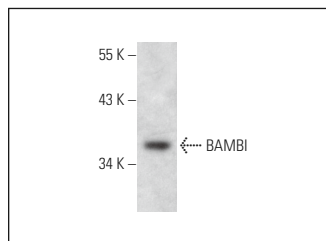
Molecular Weight of BAMBI: 29 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

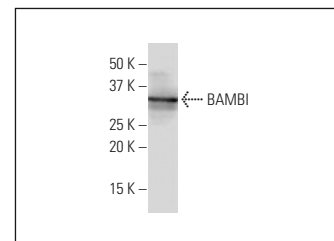
RECOMMENDED SUPPORT REAGENTS

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).

DATA



BAMBI (3B7): sc-100681. Western blot analysis of BAMBI expression in NIH/3T3 whole cell lysate.



BAMBI (3B7): sc-100681. Western blot analysis of BAMBI expression in K-562 whole cell lysate.

SELECT PRODUCT CITATIONS

- Grenier, G., et al. 2013. BMP-9 expression in human traumatic heterotopic ossification: a case report. *Skelet. Muscle* 3: 29.
- Liu, C., et al. 2014. Transcriptional repression of the transforming growth factor β (TGF- β) pseudoreceptor BMP and activin membrane-bound inhibitor (BAMBI) by nuclear factor κ B (NF κ B) p50 enhances TGF- β signaling in hepatic stellate cells. *J. Biol. Chem.* 289: 7082-7091.
- Wang, H., et al. 2021. Colorectal cancer stem cell states uncovered by simultaneous single-cell analysis of transcriptome and telomeres. *Adv. Sci.* 8: 2004320.

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.