

Tβ-15a/b (FL-45): sc-50494

BACKGROUND

β-thymosins are a family of small, water-soluble peptides. They are molecules with multiple and diverse intracellular and extracellular functions. β-thymosins are known for binding G-Actin and disturbing the assembly of F-Actin. Tβ-15a (TMSB15A), also designated neuroblastoma thymosin β (NB Tβ), or thymosin-like protein 8, is significantly similar to its family members thymosin-β15b (Tβ-15b), thymosin-β4 (Tβ-4) and thymosin-β10 (Tβ-10). Tβ-15a is a 44 amino acid protein expressed in neuroblastomas that localizes to the cytoplasm. It interacts with G-Actin and is involved in tissue invasion, cell growth and cell motility. Interference of Tβ-15a expression has been shown to decrease cell invasion. Tβ-15a may play a role in tumor development and progression. A newly described isoform of thymosin-β15, Tβ-15b is transcribed from a different gene (TMSB15B) and encodes a protein identical to Tβ-15a. The two gene isoforms are subject to different transcriptional regulation and have distinct expression.

REFERENCES

1. Yokoyama, M., et al. 1996. Identification and cloning of neuroblastoma-specific and nerve tissue-specific genes through compiled expression profiles. *DNA Res.* 3: 311-320.
2. Kobayashi, T., et al. 2002. Thymosin-β4 regulates motility and metastasis of malignant mouse fibrosarcoma cells. *Am. J. Pathol.* 160: 869-882.
3. Mamoune, A., et al. 2003. Calpain-2 as a target for limiting prostate cancer invasion. *Cancer Res.* 63: 4632-4640.
4. Huber, E., et al. 2004. Gene profiling of cottontail rabbit papillomavirus-induced carcinomas identifies upregulated genes directly involved in stroma invasion as shown by small interfering RNA-mediated gene silencing. *J. Virol.* 78: 7478-7489.
5. Chen, C., et al. 2005. Roles of thymosins in cancers and other organ systems. *World J. Surg.* 29: 264-270.
6. Schmidt, M., et al. 2006. Differential gene expression in a paclitaxel-resistant clone of a head and neck cancer cell line. *Eur. Arch. Otorhinolaryngol.* 263: 127-134.

CHROMOSOMAL LOCATION

Genetic locus: TMSB15A (human) mapping to Xq22.1, TMSB15B (human) mapping to Xq22.2; Tmsb15a/Tmsb15b1 (mouse) mapping to X F1.

SOURCE

Tβ-15a/b (FL-45) is a rabbit polyclonal antibody raised against amino acids 1-45 representing full length Tβ-15a 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.

STORAGE

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

APPLICATIONS

Tβ-15a/b (FL-45) is recommended for detection of Tβ-15a, Tβ-15b and, to a lesser extent, other Tβ family members of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

Tβ-15a/b (FL-45) is also recommended for detection of Tβ-15a, Tβ-15b and, to a lesser extent, other Tβ family members in additional species, including equine, canine, porcine and avian.

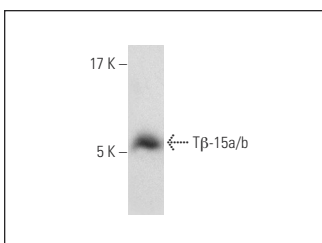
Molecular Weight of Tβ-15a/b: 5 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Tβ-15a/b (FL-45): sc-50494. Western blot analysis of Tβ-15a/b expression in IMR-32 whole cell lysate.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

MONOS
Satisfaction
Guaranteed

Try **Tβ-15a/b (B-4): sc-271649**, our highly recommended monoclonal alternative to Tβ-15a/b (FL-45).