

HOTTL (F-8): sc-166483

BACKGROUND

HOTTL (tubulin-tyrosine ligase-like protein 3) is a 352 amino acid protein encoded by the human gene TTL3. HOTTL is believed to be part of the tubulin-tyrosine ligase family and contains one TTL domain. The TTL domain is an approximately 350 amino acid module present in a family of eukaryotic proteins that could catalyze ligations of diverse amino acids to tubulins or other substrates. The TTL domain contains ATP-grasp-like motifs that correspond to the ATP/Mg²⁺ binding site typical of enzymes with ATP-dependent carboxylate-amine/thiol ligase activity. Subject to several posttranslational modifications, assembled microtubules are deetyrosinated over time at the C-terminus of α -tubulin. After microtubular disassembly TTL proteins restore tyrosine residues back to the deetyrosinated tubulin leading to a cycle of deetyrosination/tyrosination. HOTTL also may play a role in tumor cell regulation.

REFERENCES

- Galperin, M.Y. and Koonin, E.V. 1998. A diverse superfamily of enzymes with ATP-dependent carboxylate-amine/thiol ligase activity. *Protein Sci.* 6: 2639-2643.
- Regnard, C., et al. 1998. Tubulin polyglutamylase: partial purification and enzymatic properties. *Biochemistry* 37: 8395-8404.
- Janke, C., et al. 2005. Tubulin polyglutamylase enzymes are members of the TTL domain protein family. *Science* 308: 1758-1762.
- Sjöblom, T., et al. 2006. The consensus coding sequences of human breast and colorectal cancers. *Science* 314: 268-274.
- Sweet, T.J., et al. 2007. Microtubule disruption stimulates P-body formation. *RNA* 13: 493-502.

CHROMOSOMAL LOCATION

Genetic locus: TTL3 (human) mapping to 3p25.3.

SOURCE

HOTTL (F-8) is a mouse monoclonal antibody raised against amino acids 1-124 mapping at the N-terminus of HOTTL of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HOTTL (F-8) is available conjugated to agarose (sc-166483 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166483 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166483 PE), fluorescein (sc-166483 FITC), Alexa Fluor[®] 488 (sc-166483 AF488), Alexa Fluor[®] 546 (sc-166483 AF546), Alexa Fluor[®] 594 (sc-166483 AF594) or Alexa Fluor[®] 647 (sc-166483 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-166483 AF680) or Alexa Fluor[®] 790 (sc-166483 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

HOTTL (F-8) is recommended for detection of HOTTL of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 HOTTL siRNA (h): sc-62474, HOTTL shRNA Plasmid (h): sc-62474-SH and HOTTL shRNA (h) Lentiviral Particles: sc-62474-V.

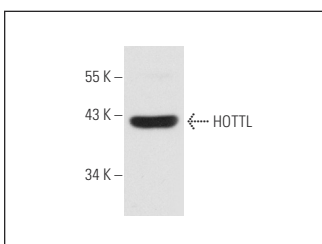
Molecular Weight of HOTTL: 40 kDa.

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). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



HOTTL (F-8): sc-166483. Western blot analysis of HOTTL expression in K-562 whole cell lysate.

STORAGE

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

PROTOCOLS

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

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