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SANTA CRUZ BIOTECHNOLOGY, INC.

ClpP (h2): 293T Lysate: sc-170553

BACKGROUND

ATP-dependent proteases were first identified in *E. coli*. One of these is called ClpAP or Ti, which consists of a regulatory unit, ClpA, with chaperone characteristics and an ATPase domain, and a proteolytic subunit, ClpP. This protease is involved in ATP-dependent degradation of incorrectly folded or unfolded proteins. The mammalian ClpP protein belongs to the peptidase family S14 and hydrolyzes proteins into small peptides in the presence of ATP and magnesium. ClpP is transported into mitochondrial matrix and is associated with the inner mitochondrial membrane. The functional form of ClpP is a hollow-cored particle composed of two heptameric rings joined face-to-face forming an aqueous chamber containing the proteolytic active sites. ClpX binds substrates bearing specific classes of peptide signals, denatures these proteins, and translocates them through the central pore of ClpP for degradation. ClpP displays high expression levels in skeletal muscle, intermediate levels in heart, liver and pancreas, and low levels in brain, placenta, lung and kidney.

REFERENCES

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2. Corydon, T.J., et al. 1998. A human homologue of *Escherichia coli* ClpP caseinolytic protease: recombinant expression, intracellular processing and subcellular localization. Biochem. J. 331: 309-316.
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5. Kang, S.G., et al. 2002. Functional proteolytic complexes of the human mitochondrial ATP-dependent protease, hClpXP. J. Biol. Chem. 277: 21095-21102.
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CHROMOSOMAL LOCATION

Genetic locus: CLPP (human) mapping to 19p13.3.

PRODUCT

ClpP (h2): 293T Lysate represents a lysate of human ClpP transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

ClpP (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive ClpP antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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.