

CUTA (S-12): sc-103447

BACKGROUND

CUTA, also known as ACHAP (acetylcholinesterase-associated protein), is the 179 amino acid mammalian homolog of the cutA *E. coli* protein and is ubiquitously expressed, particularly in brain tissue. Existing as multiple alternatively spliced isoforms, CUTA functions as a homotrimer that is thought to act as a component of an acetylcholinesterase (AChE)-attached complex, suggesting an involvement in AChE regulation. The gene encoding CUTA maps to human chromosome 6, which contains 170 million base pairs and comprises nearly 6% of the human genome. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer, suggesting the presence of a cancer susceptibility locus. Additionally, Porphyria cutanea tarda, Parkinson's disease, Stickler syndrome and a susceptibility to bipolar disorder are all associated with genes that map to chromosome 6.

REFERENCES

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2. Navaratnam, D.S., et al. 2000. Hydrophobic protein that copurifies with human brain acetylcholinesterase: amino acid sequence, genomic organization, and chromosomal localization. *J. Neurochem.* 74: 2146-2153.
3. Arnesano, F., et al. 2003. The evolutionarily conserved trimeric structure of CUTA1 proteins suggests a role in signal transduction. *J. Biol. Chem.* 278: 45999-46006.
4. Yang, J., et al. 2008. Overexpression of human CUTA isoform2 enhances the cytotoxicity of copper to HeLa cells. *Acta Biochim. Pol.* 55: 411-415.
5. Bagautdinov, B., et al. 2008. Structure of putative CUTA1 from *Homo sapiens* determined at 2.05 Å resolution. *Acta Crystallogr. Sect. F Struct. Biol. Cryst. Commun.* 64: 351-357.
6. Liang, D., et al. 2009. Protein CUTA undergoes an unusual transfer into the secretory pathway and affects the folding, oligomerization, and secretion of acetylcholinesterase. *J. Biol. Chem.* 284: 5195-5207.

CHROMOSOMAL LOCATION

Genetic locus: CUTA (human) mapping to 6p21.32; Cuta (mouse) mapping to 17 A3.3.

SOURCE

CUTA (S-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CUTA 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.

Blocking peptide available for competition studies, sc-103447 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

CUTA (S-12) is recommended for detection of CUTA 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); non cross-reactive with CUTC.

Suitable for use as control antibody for CUTA siRNA (h): sc-95128, CUTA siRNA (m): sc-105251, CUTA shRNA Plasmid (h): sc-95128-SH, CUTA shRNA Plasmid (m): sc-105251-SH, CUTA shRNA (h) Lentiviral Particles: sc-95128-V and CUTA shRNA (m) Lentiviral Particles: sc-105251-V.

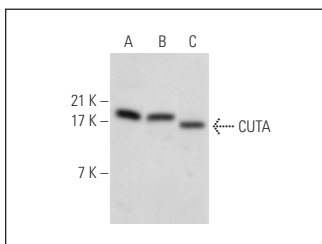
Molecular Weight of CUTA: 20 kDa.

Positive Controls: THP-1 cell lysate: sc-2238, IMR-32 cell lysate: sc-2409 or Hep G2 cell lysate: sc-2227.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CUTA (S-12): sc-103447. Western blot analysis of CUTA expression in IMR-32 (A), THP-1 (B) and Hep G2 (C) whole cell lysates.

RESEARCH USE

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

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Try **CUTA (H-8): sc-398827**, our highly recommended monoclonal alternative to CUTA (S-12).