SANTA CRUZ BIOTECHNOLOGY, INC.

HGTD-P (C-15): sc-99924

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

HGTD-P (human growth and transformation-dependent protein), also known as E2IG5 or FAM162A, is a 154 amino acid single-pass membrane protein belonging to the UPF0389 family. Considered a proapoptotic protein, HGTD-P is an effector of cell death induced by hypoxia-ischemia (HI) and is therefore considered a potential target in treating HI-induced brain damage. HGTD-P localizes to the mitochondria and, when overexpressed, induces the mitochondrial permeability transition by interacting with voltage dependent anion channels. HGTD-P facilitates apoptotic cell death via the mitochondrial apoptotic cascades, including permeability transition, cytochrome c release and caspase-9 activation. HGTD-P is regulated and activated by HIF-1α through a hypoxia-responsive element on the HGTD-P promoter region.

REFERENCES

1. Lee, M.J., et al. 2004. Identification of the hypoxia-inducible factor 1 α-responsive HGTD-P gene as a mediator in the mitochondrial apoptotic pathway. Mol. Cell. Biol. 24: 3918-3927.
2. Webster, K.A., et al. 2006. Redox stress and the contributions of BH3-only proteins to infarction. Antioxid. Redox Signal. 8: 1667-1676.
3. Kim, J.Y., et al. 2006. Interaction of pro-apoptotic protein HGTD-P with heat shock protein 90 is required for induction of mitochondrial apoptotic cascades. FEBS Lett. 580: 3270-3275.
4. Cho, Y.E., et al. 2007. mHGTD-P mediates hypoxic neuronal cell death via the release of apoptosis-inducing factor. Neurosci. Lett. 416: 144-149.
5. Cho, Y.E., et al. 2009. Expression and prognostic significance of human growth and transformation-dependent protein in gastric carcinoma and gastric adenoma. Hum. Pathol. 40: 975-981.

CHROMOSOMAL LOCATION

Genetic locus: FAM162A (human) mapping to 3q21.1; Fam162a (mouse) mapping to 16 B3.

SOURCE

HGTD-P (C-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of HGTD-P of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-99924 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.

PROTOCOLS

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

APPLICATIONS

HGTD-P (C-15) is recommended for detection of HGTD-P 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).

HGTD-P (C-15) is also recommended for detection of HGTD-P in additional species, including bovine.

Suitable for use as control antibody for HGTD-P siRNA (h): sc-78235, HGTD-P shRNA Plasmid (h): sc-78235-SH and HGTD-P shRNA (h) Lentiviral Particles: sc-78235-V.

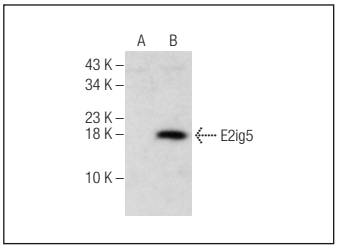
Molecular Weight of HGTD-P: 17 kDa.

Positive Controls: HGTD-P (m): 293T Lysate: sc-119899.

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



HGTD-P (C-15): sc-99924. Western blot analysis of E2ig5 expression in non-transfected: sc-117752 (**A**) and mouse E2ig5 transfected: sc-119889 (**B**) 293T whole cell lysates.

RESEARCH USE

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