SANTA CRUZ BIOTECHNOLOGY, INC.

# HGTD-P (E-8): sc-514389

## 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-1$\alpha$ 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 $\alpha$-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.
6. Tang, B., et al. 2009. *In vitro* effects of hypoxia-inducible factor 1$\alpha$ on the biological characteristics of the SiHa uterine cervix cancer cell line. Int. J. Gynecol. Cancer 19: 898-904.


## CHROMOSOMAL LOCATION

Genetic locus: FAM162A (human) mapping to 3q21.1.

## SOURCE

HGTD-P (E-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 120-139 near the C-terminus of HGTD-P of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_{2b}$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514389 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

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

## APPLICATIONS

HGTD-P (E-8) is recommended for detection of HGTD-P of human origin by Western Blotting (starting dilution 1:100, 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).

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.

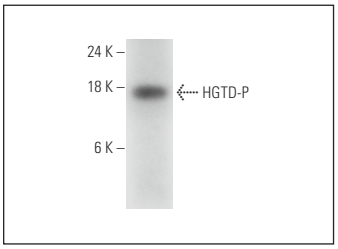
Molecular Weight of HGTD-P: 17 kDa.

Positive Controls: RT-4 whole cell lysate: sc-364257.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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




HGTD-P (E-8): sc-514389. Western blot analysis of HGTD-P expression in RT-4 whole cell lysate.

## 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.