

GCH-I (h): 293T Lysate: sc-159287

BACKGROUND

GTP cyclohydrolase I (GCH-I), a homodecamer, catalyzes the conversion of GTP into dihydroneopterin triphosphate and folate. GCH-I is the first and rate limiting enzyme in tetrahydrobiopterin (BH4) biosynthesis. BH4 is the cofactor for tyrosine hydroxylase, a rate-limiting enzyme for dopamine synthesis and tryptophan hydroxylase, the rate-limiting enzyme for serotonin biosynthesis. Dopamine and Serotonin are neurotransmitters involved in depression, which may be associated with a deficiency of BH4. Mutations in the gene encoding GCH-I cause malignant hyperphenylalaninemia, a genetic neurological disorder characterized by abnormally high levels of serum phenylalanine, and dopa-responsive dystonia (DRD), a group of movement disorders characterized by a progressive difficulty in walking which respond to L-dopa.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: GCH1 (human) mapping to 14q22.2.

PRODUCT

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

APPLICATIONS

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

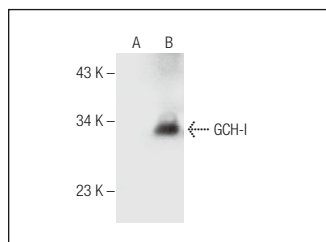
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

GCH-I (G-8): sc-376483 is recommended as a positive control antibody for Western Blot analysis of enhanced human GCH-I expression in GCH-I transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



GCH-I (G-8): sc-376483. Western blot analysis of GCH-I expression in non-transfected: sc-117752 (A) and human GCH-I transfected: sc-159287 (B) 293T whole cell lysates.

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.