SANTA CRUZ BIOTECHNOLOGY, INC.

OGG1/2 (L-19): sc-12075

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

8-oxoguanine (8-oxoG), an oxidized form of guanine, is produced by reactive oxygen species in both DNA and nucleotide pools during normal aging. Accumulation of 8-oxoG increases the occurrence of A:T to C:G or G:C to T:A transversion mutation,respectively, because 8-oxoG forms a stable basepair with adenine as well as with cytosine. OGG1 (for 8-oxoG DNA glycosylase, also designated MMH) is a DNA repair enzyme that corrects these mutations. Inactivation of the OGG1 gene leads to a mutator phenotype, characterized by the increase in GC to TA transversions. The OGG1 gene encodes 8 isoforms (OGG1A-C, OGG2A-E) which result from alternative splicing of a single messenger RNA. The OGG1A splice variant is the most prevalent form and localizes to the nucleus, whereas the OGG2A splice variant is targeted to the mitochondrion.

CHROMOSOMAL LOCATION

Genetic locus: OGG1 (human) mapping to 3p25.3; Ogg1 (mouse) mapping to 6 E3.

SOURCE

OGG1/2 (L-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of OGG1/2 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-12075 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

OGG1/2 (L-19) is recommended for detection of OGG1 and OGG2 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

OGG1/2 (L-19) is also recommended for detection of OGG1 and OGG2 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for OGG1/2 siRNA (h): sc-43983, OGG1/2 shRNA Plasmid (h): sc-43983-SH and OGG1/2 shRNA (h) Lentiviral Particles: sc-43983-V.

Molecular Weight of OGG-1: 38 kDa.

Molecular Weight of OGG-2: 47 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

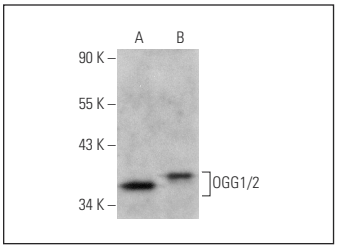
RESEARCH USE

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

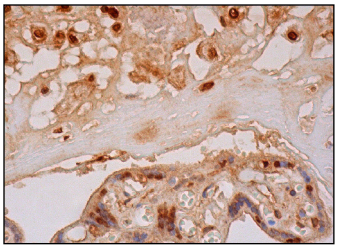
STORAGE

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

DATA



OGG1/2 (L-19): sc-12075. Western blot analysis of OGG1/2 expression in HeLa (**A**) and Jurkat (**B**) whole cell lysates.



OGG1/2 (L-19): sc-12075. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing nuclear and cytoplasmic staining of trophoblastic cells and decidual cells.

SELECT PRODUCT CITATIONS

1. D'Errico, M., et al. 2006. New functions of XPC in the protection of human skin cells from oxidative damage. EMBO J. 25: 4305-4315.
2. Li, P.Y., et al. 2007. Antibiotic amoxicillin induces DNA lesions in mammalian cells possibly via the reactive oxygen species. Mutat. Res. 629: 133-139.
3. Pu, Y.S., et al. 2007. 8-oxoguanine DNA glycosylase and MutY homolog are involved in the incision of arsenite-induced DNA adducts. Toxicol. Sci. 95: 376-382.
4. Kosmider, B., et al. 2010. Apoptosis induced by ozone and oxysterols in human alveolar epithelial cells. Free Radic. Biol. Med. 48: 1513-1524.
5. Petrova, A., et al. 2011. Photoprotection by honeybush extracts, hesperidin and mangiferin against UVB-induced skin damage in SKH-1 mice. J. Photochem. Photobiol. B, Biol. 103: 126-139.

PROTOCOLS

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