SANTA CRUZ BIOTECHNOLOGY, INC.

XPC (H-300): sc-30156

BACKGROUND

Xeroderma pigmentosum (XP) is an autosomal recessive disorder characterized by a genetic predisposition to sunlight-induced skin cancer due to deficiencies in the DNA repair enzymes. The most frequent mutations are found in the XP genes of group A through G and group V, which encode nucleotide excision repair (NER) proteins. NER provides versatile DNA repair mechanisms to ensure the proper functioning of all cells. The majority of patients with XP carry mutations in either the XPA or XPC genes, which encode proteins involved in the recognition of damaged DNA. The gene encoding human XPC maps to chromosome 3p25.1. XPC forms a complex with Cen2 and the human homolog of yeast Rad23B (HR23B), both of which stabilize XPC; it also excises thymine dimers from damaged DNA. Specifically, the carboxy-terminus of XPC is required for HR23B and DNA binding and, subsequently, mutations leading to carboxy-terminal truncations result in nonfunctional XPC proteins.

CHROMOSOMAL LOCATION

Genetic locus: XPC (human) mapping to 3p25.1; Xpc (mouse) mapping to 6 D1.

SOURCE

XPC (H-300) is a rabbit polyclonal antibody raised against amino acids 641-940 mapping at the C-terminus of XPC 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.

APPLICATIONS

XPC (H-300) is recommended for detection of XPC 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).

XPC (H-300) is also recommended for detection of XPC in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for XPC siRNA (h): sc-37805, XPC siRNA (m): sc-37806, XPC shRNA Plasmid (h): sc-37805-SH, XPC shRNA Plasmid (m): sc-37806-SH, XPC shRNA (h) Lentiviral Particles: sc-37805-V and XPC shRNA (m) Lentiviral Particles: sc-37806-V.

Molecular Weight of XPC: 125 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hs68 cell lysate: sc-2230 or Raji whole cell lysate: sc-364236.

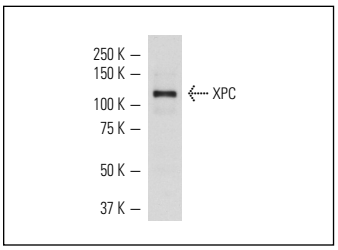
STORAGE

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

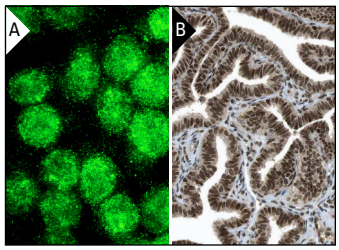
RESEARCH USE

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

DATA



XPC (H-300): sc-30156. Western blot analysis of XPC expression in Hs68 whole cell lysate.



XPC (H-300): sc-30156. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing nuclear staining of glandular cells magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Wu, Y.H., et al. 2007. Reduced XPC messenger RNA level may predict a poor outcome of patients with nonsmall cell lung cancer. Cancer 110: 215-223.
2. Long, X.D., et al. 2010. Polymorphism in xeroderma pigmentosum complementation group C codon 939 and aflatoxin B1-related hepatocellular carcinoma in the Guangxi population. Hepatology 52: 1301-1309.
3. Schwerdtle, T., et al. 2010. Genotoxicity of soluble and particulate cadmium compounds: impact on oxidative DNA damage and nucleotide excision repair. Chem. Res. Toxicol. 23: 432-442.
4. Hardy, T.M., et al. 2010. RB stabilizes XPC and promotes cellular NER. Anticancer Res. 30: 2483-2488.
5. Singh, K.P., et al. 2011. Chronic exposure to arsenic causes increased cell survival, DNA damage, and increased expression of mitochondrial transcription factor A (mtTFA) in human prostate epithelial cells. Chem. Res. Toxicol. 24: 340-349.
6. Liu, R.Y., et al. 2011. Role of eIF3a in regulating cisplatin sensitivity and in translational control of nucleotide excision repair of nasopharyngeal carcinoma. Oncogene 30: 4814-4823.
7. Abbasi, R., et al. 2012. The endoperoxide ascaridol shows strong differential cytotoxicity in nucleotide excision repair-deficient cells. Toxicol. Appl. Pharmacol. 259: 302-310.