SANTA CRUZ BIOTECHNOLOGY, INC.

XPC (D-18): sc-22535

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 (D-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near 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.

Blocking peptide available for competition studies, sc-22535 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

XPC (D-18) 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), 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 (D-18) is also recommended for detection of XPC in additional species, including equine, canine 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 or Hs68 cell lysate: sc-2230.

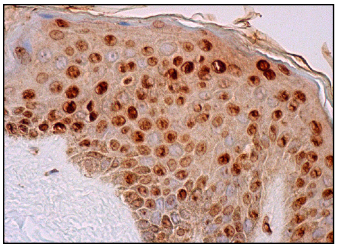
STORAGE

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 (D-18): sc-22535. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing nuclear and cytoplasmic staining of epidermal cells.

SELECT PRODUCT CITATIONS

1. Chen, Z., et al. 2007. Attenuated expression of xeroderma pigmentosum group C is associated with critical events in human bladder cancer carcinogenesis and progression. Cancer Res. 67: 4578-4585.
2. Guthrie, O.W., et al. 2008. Cisplatin induces cytoplasmic to nuclear translocation of nucleotide excision repair factors among spiral ganglion neurons. Hear. Res. 239: 79-91.
3. Guthrie, O.W. 2008. Preincision complex-I from the excision nuclease reaction among cochlear spiral limbus and outer hair cells. J. Mol. Histol. 39: 617-625.
4. Guthrie, O.W. 2008. Dys-synchronous regulation of XPC and XPA in trigeminal ganglion neurons following cisplatin treatment cycles. Anticancer Res. 28: 2637-2640.
5. Guthrie, O.W. 2009. DNA repair proteins and telomerase reverse transcriptase in the cochlear lateral wall of cisplatin-treated rats. J. Chemother. 21: 74-79.
6. Le May, N., et al. 2010. NER factors are recruited to active promoters and facilitate chromatin modification for transcription in the absence of exogenous genotoxic attack. Mol. Cell 38: 54-66.
7. Guthrie, O.W. and Xu, H. 2012. Noise exposure potentiates the subcellular distribution of nucleotide excision repair proteins within spiral ganglion neurons. Hear. Res. 294: 21-30.

PROTOCOLS

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