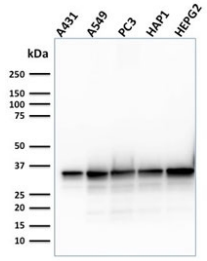
APE1 Antibody CPTC-APEX1-2 / AP Endonuclease 1 Antibody [clone CPTC-APEX1-2] (V7287)

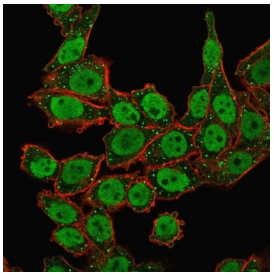
Catalog No.	Formulation	Size
V7287-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7287-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7287SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V7287IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Bulk quote request

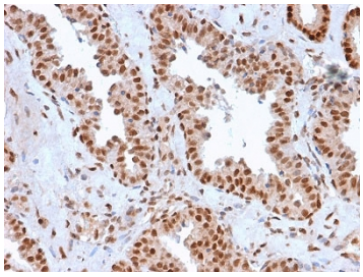
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	CPTC-APEX1-2
Purity	Protein G affinity chromatography
UniProt	P27695
Localization	Nuclear, cytoplasmic (mitochondria)
Applications	Flow cytometry: 1-2ug/10^6 cells Immunofluorescence: 1-2ug/ml Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 0.5-1ug/ml for 30 min at RT
Limitations	This APE1 Antibody CPTC-APEX1-2 / AP Endonuclease 1 Antibody is available for research use only.



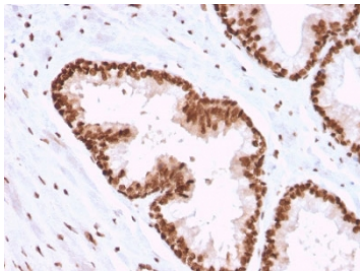
APE1 Antibody CPTC-APEX1-2 Detection in Human Cancer Cell Lines WB. Western blot testing of human A431, A549, PC-3, HAP1 and HepG2 cell lysates with APE1 Antibody clone CPTC-APEX1-2 shows a strong, discrete band at approximately 35-37 kDa across all five samples, consistent with the predicted molecular weight of ~38 kDa for AP endonuclease 1. The clean, target-sized signal across multiple cell types supports detection of endogenous APE1.



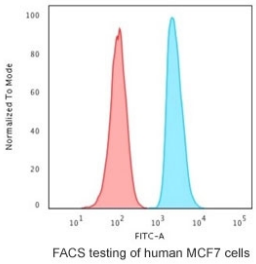
APE1 Antibody CPTC-APEX1-2 Staining of HeLa Cervical Cancer Cells IF. Immunofluorescence staining of permeabilized human HeLa cervical cancer cells with APE1 Antibody clone CPTC-APEX1-2 shows strong green APE1 signal concentrated in the nuclei, with additional cytoplasmic staining. Red phalloidin staining delineates the actin cytoskeleton and cellular architecture.



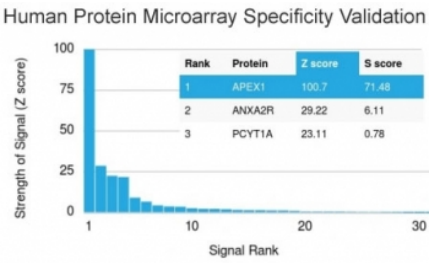
APE1 Antibody CPTC-APEX1-2 Staining of Human Prostate Carcinoma IHC. Immunohistochemistry testing of FFPE human prostate carcinoma with APE1 Antibody clone CPTC-APEX1-2 shows prominent brown nuclear staining throughout the carcinoma cells, with variable additional cytoplasmic immunoreactivity. HIER was performed by steaming sections in pH 6 citrate buffer for 20 min followed by cooling before antibody testing.



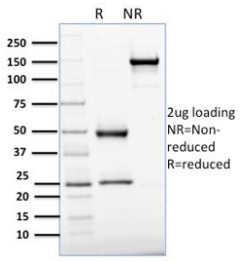
AP Endonuclease 1 Antibody CPTC-APEX1-2 Staining of Human Prostate Carcinoma IHC. Immunohistochemistry testing of FFPE human prostate carcinoma with AP Endonuclease 1 Antibody clone CPTC-APEX1-2 shows strong brown staining of the glandular epithelium, including prominent nuclear and cytoplasmic immunoreactivity, with substantially less staining in the surrounding stromal tissue. HIER was performed by steaming sections in pH 6 citrate buffer for 20 min followed by cooling before antibody testing.



APE1 Antibody CPTC-APEX1-2 Detection in MCF7 Breast Cancer Cells FACS. Flow cytometry testing of human MCF7 breast cancer cells with APE1 Antibody clone CPTC-APEX1-2 shows a pronounced rightward fluorescence shift of the antibody-stained population (blue) relative to the isotype control (red), demonstrating intracellular detection of APE1.



APE1 Antibody CPTC-APEX1-2 Protein Microarray Validation. Protein microarray analysis of APE1 Antibody clone CPTC-APEX1-2 using a HuProt array containing more than 19,000 full-length human proteins identifies APEX1 as the dominant binding target. APEX1 ranks first with a Z-score of 100.7 and S-score of 71.49, showing strong separation from the next-highest protein signal. The Z-score represents target-binding signal relative to the array mean, while the S-score measures separation from the next-highest target, supporting the specificity of this Protein Microarray Validated antibody.



APE1 Antibody CPTC-APEX1-2 Purity Analysis by SDS-PAGE. SDS-PAGE analysis of purified, BSA-free APE1 Antibody clone CPTC-APEX1-2 with 2 ug loaded under reduced (R) and non-reduced (NR) conditions. Reduction produces the expected immunoglobulin heavy and light chains at approximately 50 kDa and 25 kDa, while the non-reduced antibody migrates predominantly near 150 kDa, consistent with intact IgG. The defined banding pattern supports the integrity and purity of the monoclonal antibody preparation.

Description

APE1 Antibody CPTC-APEX1-2 / AP Endonuclease 1 Antibody recognizes apurinic/apyrimidinic endonuclease 1, a multifunctional protein encoded by the APEX1 gene. APE1 is best known as a central enzyme in the base excision repair pathway, where it processes apurinic/apyrimidinic sites generated spontaneously or during the removal of damaged DNA bases. This activity helps maintain genomic stability and protects cells from the accumulation of potentially mutagenic DNA lesions.

During base excision repair, a DNA glycosylase first removes a damaged base, leaving an abasic site in the DNA backbone. APE1 cleaves the phosphodiester backbone adjacent to this site, creating an intermediate that can subsequently be processed by DNA polymerases and DNA ligases. Through this function, AP endonuclease 1 contributes to the repair of DNA damage caused by oxidative stress, alkylation and normal cellular metabolism.

APE1 also has a distinct regulatory function historically associated with the name Ref-1, or redox factor 1. Through redox-dependent mechanisms, APE1 can influence the DNA-binding activity of several transcription factors and thereby connect cellular responses to oxidative conditions with transcriptional regulation. These dual DNA repair and regulatory activities have made APE1 an important subject in studies of genome maintenance, cellular stress and cancer biology.

Altered APE1 expression or localization has been investigated in numerous malignancies, where changes in DNA repair capacity and cellular stress responses may influence tumor biology and treatment response. Researchers studying APE1 therefore examine both its enzymatic role in base excision repair and its broader effects on signaling and transcriptional regulation.

Clone CPTC-APEX1-2 is a mouse monoclonal antibody directed against human APE1. This APE1 Antibody is Protein Microarray Validated using a HuProt array containing more than 19,000 full-length human proteins. The Z-score measures target-binding signal relative to the mean signal across the array, while the S-score measures separation between the intended target and the next-highest protein signal, providing complementary measures of binding strength and specificity. NSJ Bioreagents offers this AP Endonuclease 1 Antibody for research into APE1 protein biology, DNA repair and cellular stress regulation.

Researchers investigating APE1 expression, DNA repair and cancer-associated cellular stress responses can explore related targets on our Cancer Marker Antibodies page.

Application Notes

Optimal dilution of the APE1 Antibody CPTC-APEX1-2 / AP Endonuclease 1 Antibody to be determined by the researcher.

1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Recombinant full-length human protein was used as the immunogen for the APE1 antibody.

Storage

Store the APE1 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

APE1 antibody, AP endonuclease 1 antibody, Apurinic/apyrimidinic endonuclease 1 antibody, REF1 antibody, Redox factor 1 antibody

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