

# DNA Ligase IV (C-18): sc-11750

## BACKGROUND

The X-ray repair cross-complementing protein XRCC4 and DNA Ligase IV are essential for repairing double-strand breaks in DNA. These proteins form a critical complex consisting of two molecules of each protein that preferentially bind DNA with nicks or broken ends. As an obligate accessory molecule, XRCC4 binds to DNA Ligase IV and enhances its joining activity. The XRCC4/DNA Ligase IV complex is also involved in V(D)J recombination. V(D)J recombination occurs in normal development of the adaptive immune system and involves the formation of a double-strand break intermediate. Deletions of either DNA Ligase IV or XRCC4 inhibit the completion of V(D)J recombination, resulting in a high incidence of apoptosis in the developing nervous system and a block in B and T cell maturation.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: LIG4 (human) mapping to 13q33.3.

## SOURCE

DNA Ligase IV (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of DNA Ligase IV 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-11750 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

DNA Ligase IV (C-18) is recommended for detection of DNA Ligase IV of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

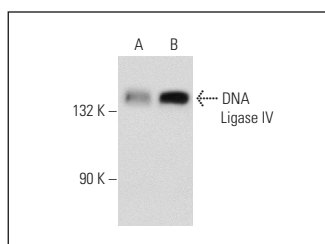
DNA Ligase IV (C-18) is also recommended for detection of DNA Ligase IV in additional species, including equine and porcine.

Suitable for use as control antibody for DNA Ligase IV siRNA (h): sc-37394, DNA Ligase IV shRNA Plasmid (h): sc-37394-SH and DNA Ligase IV shRNA (h) Lentiviral Particles: sc-37394-V.

Molecular Weight of DNA Ligase IV: 96 kDa.

Positive Controls: DNA Ligase IV (h): 293T Lysate: sc-159741, HeLa whole cell lysate: sc-2200 or HeLa nuclear extract: sc-2120.

## DATA



DNA Ligase IV (C-18): sc-11750. Western blot analysis of DNA Ligase IV expression in non-transfected: sc-117752 (A) and human DNA Ligase IV transfected: sc-159741 (B) 293T whole cell lysates.

## 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.


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