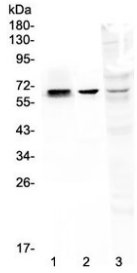
COBRA1 Antibody / Cofactor of BRCA1 / NELFB (RQ4476)

Catalog No.	Formulation	Size
RQ4476	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	Q8WX92
Localization	Nucleus
Applications	Western Blot : 0.5-1ug/ml Direct ELISA : 0.1-0.5ug/ml (human recombinant protein)
Limitations	This COBRA1 antibody is available for research use only.



Western blot testing of 1) rat kidney, 2) mouse kidney and 3) human MDA-MB-231 lysate with COBRA1 antibody at 0.5ug/ml. Predicted molecular weight ~66 kDa.

Description

COBRA1 antibody detects Cofactor of BRCA1, a nuclear protein that functions as a transcriptional coregulator and chromatin-associated factor. The UniProt recommended name is Cofactor of BRCA1 (COBRA1). This protein plays an important role in transcriptional control, DNA damage response, and gene silencing by acting as a subunit of the negative elongation factor (NELF) complex, which regulates RNA polymerase II pausing during transcription elongation.

Functionally, COBRA1 antibody identifies a 603-amino-acid nuclear protein that interacts with BRCA1, linking it to DNA repair and cell cycle regulation. Within the NELF complex, COBRA1 (also referred to as NELF-B) associates with NELF-A, NELF-C/D, and NELF-E to repress transcription elongation at specific promoter regions. This pausing mechanism allows cells to fine-tune gene expression in response to developmental cues and environmental stress. COBRA1 is also involved in chromatin remodeling and epigenetic regulation, where it helps maintain proper nucleosome positioning and transcriptional fidelity.

The COBRA1 gene (officially known as NELFB) is located on chromosome 9q34.3 and is expressed in a variety of tissues including liver, testis, and lung, with high nuclear localization. It was originally identified as a BRCA1-interacting protein, and subsequent studies have shown that its association with BRCA1 contributes to tumor suppression by stabilizing gene expression networks that preserve genomic integrity. In addition, COBRA1 is implicated in the control of estrogen receptor signaling and developmental transcriptional programs.

Pathologically, altered expression of COBRA1 has been linked to cancer development and progression. Decreased COBRA1 expression has been observed in breast and ovarian cancers, where loss of its repressive function can promote uncontrolled transcription and proliferation. Conversely, overexpression may disrupt normal transcriptional balance. Its role in transcriptional pausing also connects it to viral gene regulation and cellular stress responses. Research using COBRA1 antibody supports studies in transcriptional regulation, BRCA1-related tumor suppression, and chromatin biology.

COBRA1 antibody is validated for use in relevant research applications to detect NELF complex components and investigate transcriptional control mechanisms. NSJ Bioreagents provides COBRA1 antibody reagents optimized for studies in gene regulation, DNA repair, and cancer biology.

Application Notes

Optimal dilution of the COBRA1 antibody should be determined by the researcher.

Immunogen

Human COBRA1 recombinant protein (amino acids M1-E252) was used as the immunogen for the COBRA1 antibody.

Storage

After reconstitution, the COBRA1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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