**BACKGROUND**

Fanconi anemia (FA) is an autosomal recessive disorder characterized by bone marrow failure, birth defects and chromosomal instability. At the cellular level, FA is characterized by spontaneous chromosomal breakage and a unique hypersensitivity to DNA cross-linking agents. At least 8 complementation groups (A-G) have been identified and 6 FA genes (for subtypes A, C, D2, E, F and G) have been cloned. The FA proteins lack sequence homologies or motifs that could point to a molecular function. Phosphorylation of FANC (Fanconi anemia complementation group) proteins are thought to be important for the function of the FA pathway. Several FA proteins, including FANCA, FANCC, FANCF, and FANCG, interact in a nuclear complex, and this complex is required for the activation (monoubiquitination) of the downstream FANCD2 protein. When monoubiquitinated, the FANCD2 protein co-localizes with the breast cancer susceptibility protein BRCA1 in DNA damage induced foci. In male meiosis, FANCD2 also co-localizes with BRCA1 at synaptonemal complexes. The human FANCD2 gene maps to chromosome 3p25.3, contains 44 exons and encodes a 1,451 amino acid nuclear protein that exists as two protein isoforms.

**CHROMOSOMAL LOCATION**

Genetic locus: FANCD2 (human) mapping to 3p25.3; Fancd2 (mouse) mapping to 6 E3.

**SOURCE**

FANCD2 (H-300) is a rabbit polyclonal antibody raised against amino acids 1172-1471 mapping at the C-terminus of FANCD2 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**

FANCD2 (H-300) is recommended for detection of FANCD2 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).


Molecular Weight of FANCD2: 150 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, MCF7 nuclear extract: sc-2149 or mouse brain extract: sc-2253.

**RESEARCH USE**

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

**STORAGE**

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

**DATA**

![Western blot analysis of FANCD2 expression in HeLa (A) and MCF7 (B) nuclear extracts.](image1)

![Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse brain tissue showing nuclear localization in select cells.](image2)

**SELECT PRODUCT CITATIONS**


**PROTOCOLS**

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