

#4945 Store at -20°C

Phospho-FANCD2 (Ser222) Antibody

100 µl
 (10 western blots)



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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #2177
Swiss-Prot Acc. #Q9BXW9

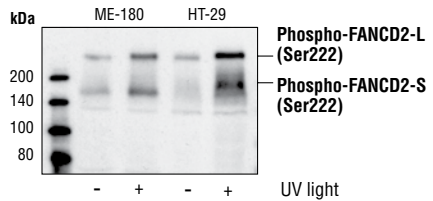
Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H, Mk	155 kDa FANCD2-S 230 kDa FANCD2-L.	Rabbit**

Background: Fanconi anemia (FA) is an autosomal recessive genetic disorder resulting in symptoms that include chromosomal breakage, bone marrow failure, hypersensitivity to DNA cross-linking agents (such as MMC), and a predisposition to cancer (1). FANCD2 is the gene product of one of at least six genes thought to contribute heterogeneously to FA (2). MMC treatment results in ubiquitination of FANCD2 on Lys561, converting the protein from a short form (FANCD2-S) to a monoubiquitinated or long (FANCD2-L) form that localizes to subnuclear foci at sites of DNA damage with BRCA1, Rad51, and NBS1 (3-5). Ionizing radiation, on the other hand, results in ATM-dependent phosphorylation of FANCD2 at Ser222 and Ser1404 resulting in an S-phase arrest (4).

Specificity/Sensitivity: Phospho-FANCD2 (Ser222) Antibody detects endogenous levels of FANCD2 only when phosphorylated at Ser222.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser222 of human FANCD2. Antibodies are purified by protein A and peptide affinity chromatography.

- Background References:**
- (1) Alter, B.P. (1996) *Am. J. Hematol.* 53, 99–110.
 - (2) Timmers, C. et al. (2001) *Mol. Cell* 7, 241–248.
 - (3) Garcia-Higuera, I. et al. (2001) *Mol. Cell* 7, 249–262.
 - (4) Taniguchi, T. et al. (2002) *Cell* 109, 459–472.
 - (5) Nakanishi, K. et al. (2002) *Nat. Cell Biol.* 4, 913–920.



Western blot analysis of extracts from untreated or UV-treated (50 mJ/cm², 1hr) ME-180 and HT-29 cells, using Phospho-FANCD2 (Ser222) Antibody.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:
 Western blottingzz 1:1000

For application specific protocols please see the web page for this product at www.cellsignaling.com.

Please visit www.cellsignaling.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.