

#14657 Store at -20°C

FANCA (D1L2Z) Rabbit mAb**Cell Signaling**
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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	H	Endogenous	160	Rabbit IgG	#O15360	2175

Product Usage Information**Application**Western Blotting
Immunoprecipitation**Dilution**1:1000
1:100**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity / Sensitivity

FANCA (D1L2Z) Rabbit mAb recognizes endogenous levels of total FANCA protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala514 of human FANCA protein.

Background

Fanconi anemia (FA) is an autosomal recessive genetic disorder that results in chromosomal breakage, bone marrow failure, hypersensitivity to DNA cross-linking agents (such as mitomycin C), and a predisposition to cancer (1). The ubiquitously expressed FA complementation group A protein (FANCA, FAA) is a component of the FA nuclear complex that also contains FANCB, FANCC, FANCE, FANCF, FANCG, FANCL, and FANCM. In response to DNA damage, the FA nuclear complex induces mono-ubiquitination of FANCD2 and FANCI (2). FANCI/BRIP1, FANCD1/BRCA2 and FANCN/PALB2 are then recruited to sites of DNA damage along with other DNA repair proteins. FA signaling is important in maintenance of chromosome stability and control of mitosis (3).

DNA-damage-dependent localization and stability of FANCA protein regulates FA complex function and localization. Interaction between FANCA protein and the Hsp90 chaperone protein regulates FANCA protein stability and turnover, and may play a role in controlling the FA DNA damage pathway (4). Mutations in the corresponding FANCA gene are responsible for the majority of cases of Fanconi anemia (5).

Background References

1. Alter, B.P. (1996) *Am J Hematol* 53, 99-110.
2. Fei, P. et al. (2005) *Cell Cycle* 4, 80-6.
3. Nalepa, G. and Clapp, D.W. (2014) *F1000Prime Rep* 6, 23.
4. Oda, T. et al. (2007) *Blood* 109, 5016-26.
5. Yuan, F. et al. (2010) *Front Biosci (Landmark Ed)* 15, 1131-49.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key**WB:** Western Blotting **IP:** Immunoprecipitation**Cross-Reactivity Key**

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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