

Certificate of Analysis**Product:** Affinity Purified Anti-FANCG (Rabbit)**Code:** 600-401-671**Lot #:** 17146**Size:** 100 µg**Physical State:** Liquid (sterile filtered)**Antibody Concentration:** 0.93 mg/ml (by UV absorbance at 280 nm)**Buffer:** 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2**Stabilizer:** None**Preservative:** 0.01% (w/v) Sodium Azide

Storage Conditions: Store vial at -20° C prior to opening. Dilute only prior to immediate use. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Expiration date is one (1) year from date of opening.

Background Information: FANCG (also called Protein FANCG or DNA-repair protein XRCC9) is involved in DNA repair, perhaps specifically with post-replication repair or a cell cycle checkpoint function. FANCG may also be implicated in interstrand DNA cross-link repair and in the maintenance of normal chromosome stability. This protein may also function as a tumor suppressor gene. FANCG belongs to the multi-subunit Fanconi Anemia (FA) complex composed of FANCA, FANCB, FANCC, FANCE, FANCF, FANCG, FANCL/PHF9 and FANCM. FANCG contains a 5-prime GC-rich untranslated region characteristic of housekeeping genes. The putative 622-amino acid protein has a leucine-zipper motif at its N-terminus. FANCG is mainly found within the nucleus although some protein is localized in the cytoplasm. This protein is highly expressed in testis and thymus and is also found in lymphoblasts. Fanconi anemia is an autosomal recessive disorder with diverse clinical symptoms, including developmental anomalies, bone marrow failure, and early occurrence of malignancies caused by defects in the FANCG gene. At the cellular level it is associated with hypersensitivity to DNA-damaging agents, chromosomal instability (increased chromosome breakage), and defective DNA repair.

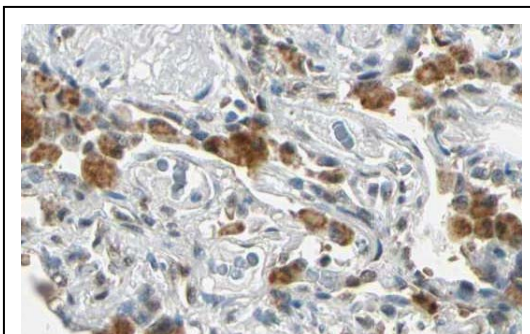
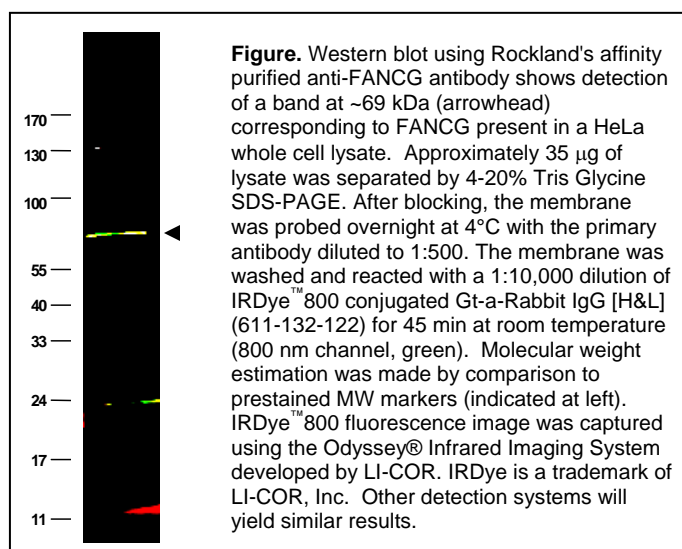


Figure 2. Immunohistochemistry. Rockland's Affinity Purified anti-FANCG antibody shows strong nuclear and cytoplasmic staining of cells of macrophages in human lung tissue. Tissue was formalin-fixed and paraffin embedded. Brown color indicates presence of protein, blue color shows cell nuclei. *Personal Communication, Kenneth Wester, www.proteinatlas.org, Uppsala, Sweden.*

Recommended Dilutions:

ELISA	1:10,000 - 1:50,000
WESTERN BLOT	1:500 - 1:2,000
IMMUNOHISTOCHEMISTRY	1:500 - 1:2,000
OTHER APPLICATIONS	User Optimized

Application Note(s): This affinity purified antibody has been tested for use in ELISA, immunohistochemistry and by western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 69 kDa in size corresponding to FANCG by western blotting in the appropriate human tissue.

Purity and Specificity: This affinity-purified antibody is directed against human FANCG protein. The product was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest cross reactivity with FANCG protein from human and chimpanzee based on 100% homology with the immunizing sequence. Reactivity against homologues from other sources is not known.

Immunogen: This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids 1-12 of human FANCG protein.

Relevant Links: NCBI [NP_004620](#) Swiss-Prot [O15287](#)

Protein Sequence: Human FANCG, 622 aa, predicted MW 68.6 kDa

1	msrqttsvgs	scldlwrekn	dlrvrqakva	qnsqtlrrq	qlaqdalegl	rgllhslqgl
61	paavpvlple	ltvtcnfiil	raslaqqfte	dqaqdiqrsi	ervletqeqq	gprleqglre
121	lwdsvlrasc	lpellsalh	rivglqaalw	lsadrlgdla	lletngsq	sgaskdilll
181	lktwspaaee	ldapltlqda	qglkdvlta	fayrqglqel	itgnpdkals	sheaasglc
241	prpvlvqvvt	algschrkmg	npqrallylv	aalkegsawg	ppleasrly	qqlgdttael
301	eslellveal	nvpccskapq	flievelllp	ppdlasplhc	gtqsqtkhil	asrcqtgra
361	gdaaeihyld	lalldssep	rfspppsppg	pcmpevflea	avaliqagra	qdalliceel
421	lsrtssllpk	msrlwedark	gtkelpycpl	wvsathllqg	qawvqlgaqk	vaisefsrcl
481	ellfratpee	keggaafnce	qgcksdaalq	qlraaalir	glewvasgqd	tkalqdflls
541	vqmcpgnrdt	yfhllqtkr	ldrrdeatal	wrrleaqtkg	shedalwslp	lylesylswi
601	rpsdrdafle	efrtslpksc	dl			

General References:

Mi, J. and Kupfer, G.M. (2005) The Fanconi anemia core complex associates with chromatin during S phase. *Blood* **105** (2), 759-766.

Franco, S., van de Vrugt, H.J., Fernandez, P., Aracil, M., Arwert, F. and Blasco, M.A. (2004) Telomere dynamics in Fancg-deficient mouse and human cells. *Blood* **104** (13), 3927-3935.

Park, S.J., Ciccone, S.L., Beck, B.D., Hwang, B., Freie, B., Clapp, D.W. and Lee, S.H. (2004) Oxidative stress/damage induces multimerization and interaction of Fanconi anemia proteins. *J. Biol. Chem.* **279** (29), 30053-30059

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Hussain, S., Witt, E., Huber, P.A., Medhurst, A.L., Ashworth, A. and Mathew, C.G. (2003) Direct interaction of the Fanconi anaemia protein FANCG with BRCA2/FANCD1. *Hum. Mol. Genet.* **12** (19), 2503-2510.

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 #[B501-0500](#) BLOTTO
 #[BSA-30](#) 30% BOVINE SERUM ALBUMIN SOL'N in 0.85% sodium chloride (no preservative or stabilizer)
 #[B304](#) NORMAL GOAT SERUM (NGS)
 #[MB-070](#) Blocking Buffer for Fluorescent Western Blotting
 #[KIA-003](#) **MaxTag**TM Anti-RABBIT IgG Kit for Immunoblotting
 #[MB-070](#) Blocking Buffer for Fluorescent Western Blotting

Note: This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 326, Gilbertsville, Pennsylvania, USA.