

FANCA Immortalized primary FA human fibroblasts

PD220 (*FANCA*^{-/-})

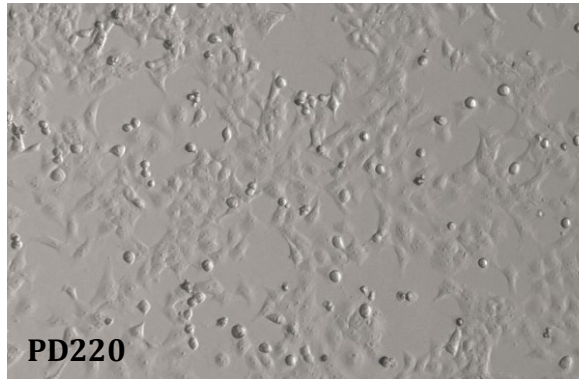
PD220 LV:A (*FANCA*^{-/-} plus LentiViral FANCA transgene) [**Clone 2**]

Description

Organism: *Homo sapiens*, human

Tissue: Skin sample donated by FA patient to Oregon Health and Science University.

Synonyms: FANCA, FA group A cell line PD220



References

>Immortalization achieved using this procedure:

Immortalization of Four New Fanconi Anemia Fibroblast Cell Lines by an Improved Procedure. P.M. Jakobs, et al., Somatic Cell and Molecular Genetics. 1996

>Generation of LV:A Clone 2:

Fanconi anemia DNA crosslink repair factors protect against LINE-1 retrotransposition during mouse development. Nazareno Bona & Gerry P. Crossan. nature structural & molecular biology. 2023

[Access free PDF versions](#)

Growth Media

Alpha MEM (HyClone, SH30265.01) or DMEM (Gibco #41966029), 15% fetal bovine serum (FBS, Hyclone Laboratories, SH30071.03), and 1% penicillin-streptomycin (Gibco #15140122).

Antibiotic Resistance

Cell Line	Hygromycin	G418 (neo)
PD220		+
PD220 LV:A	+	

The **PD220 LV:A** clone 2 carries a **Hygromycin** expression vector and can be maintained, or intermittently selected, in 100µg/mL Hygromycin to ensure a pure transgenic culture. A recommendation is to passage twice in medium containing hygromycin, then twice in medium without hygromycin before experiments.

The PD220 line carries a G418 (neo) resistance marker residual from complementation assays and not essential to the *FANCA*^{-/-} phenotype. If you would like to maintain the line in G418, the recommended dose is 500µg/mL.

Corrected clone 2

Contributing Investigator: Nazareno Bona and Gerry Crossan, 2023

Validation: Joseph Hallett, 2024

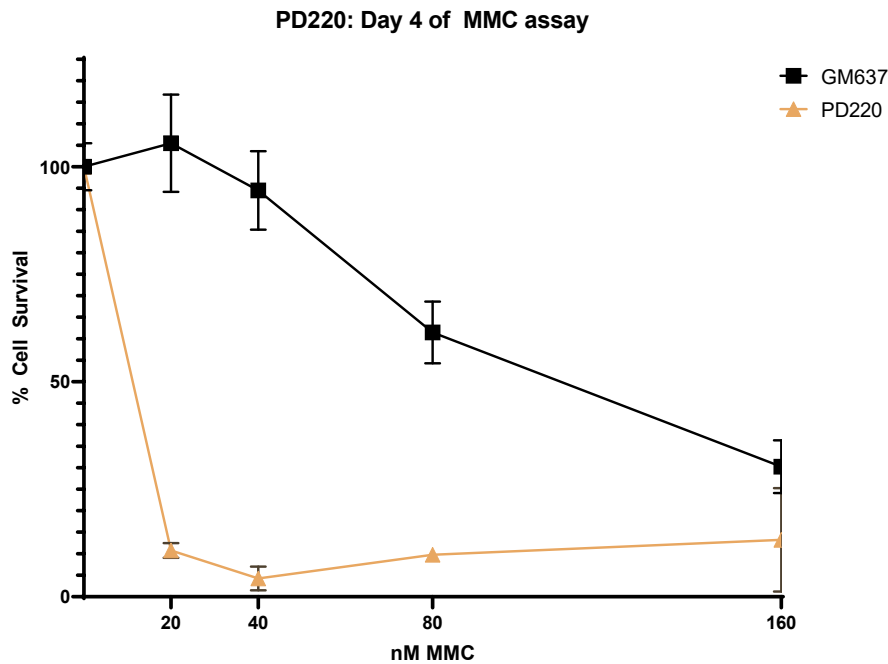
Datasheet version: 12.9.2024

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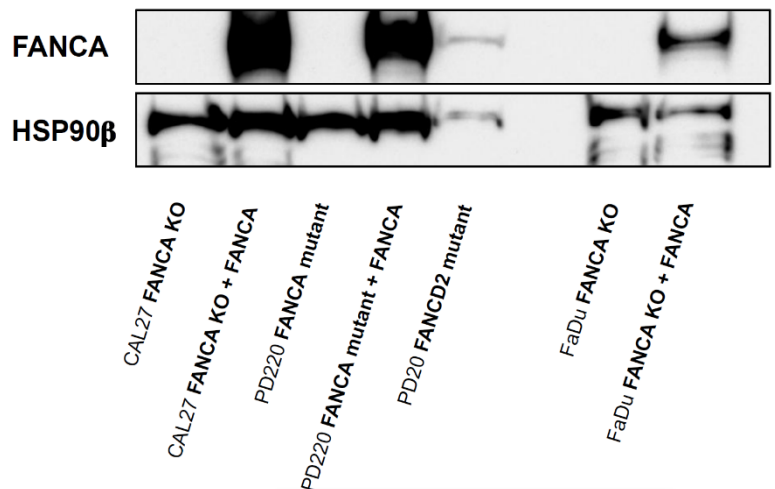
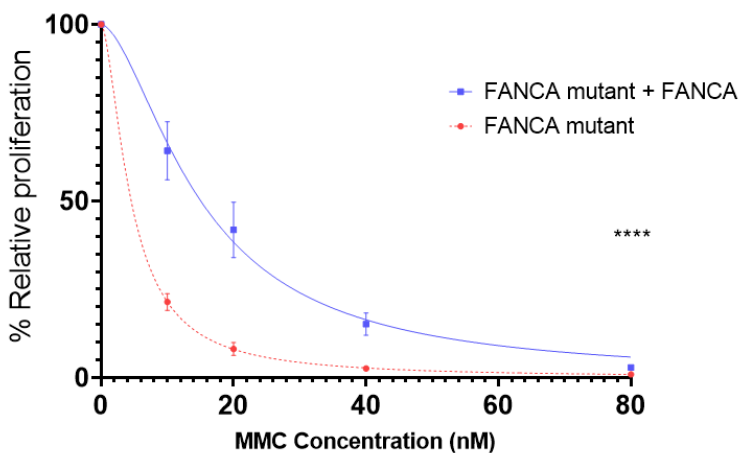
MMC Assays

1. PD220 vs control GM637

Protocol: 2,500 cells/well were plated in 48 well plates in 250 ul of complete growth medium in quadruplicate per cell line. Growth medium was replaced by media containing 0-160 nM mitomycin-C (Research Products International CAS# 50-07-7) the next day. Cells were grown for 4d in the presence of drug without refeeding prior to quantifying cell survival using Cell Counting Kit-8 (Bimake CAT #B34304). Data were normalized versus control wells that had received no MMC.



2. PD220 vs Corrected clone 2 Joseph Hallett 2024



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Quality Control Testing for PD220 and PD220 LV:A

- A terminal expansion sample was sent December 2021 to IDEXX BioAnalytics (Columbia, MO, USA) and authenticated using the Cell Check 16 Plus service as well as tested for *Mycoplasma* and interspecies contamination from mouse, rat, African green monkey and Chinese hamster.

Cell Line	Mycoplasma sp.	mouse	rat	Human	Chinese Hamster	African Green Monkey
PD220	-	-	-	+	-	-
PD220 LV:A	-	-	-	+	-	-

- A Human 16 species-specific **STR marker profile** has been established for this cell line and used for comparative analysis with available published profiles to confirm its unique identity. The genetic profile can be used for future comparisons of this cell line.

	IDEXX Case #	38010-21-01	131000-2024*
	Cell Line ID	PD220 FANCA	PD220 (LV:A)
X, Y	AMEL	X, Y	X, Y
Chr 5	CSF1PO	11, 12	11, 12
Chr 13	D13S317	11, 13	11, 13
Chr 16	D16S539	10, 13	10, 13
Chr 18	D18S51	17	17
Chr 21	D21S11	29, 30	29, 30
Chr 3	D3S1358	15, 16	15, 16
Chr 5	D5S818	10, 12	10, 12
Chr 7	D7S820	10, 11	10, 11
Chr 8	D8S1179	14	14
Chr 4	FGA	25	25
Chr 21	Penta_D	5	5
Chr 15	Penta_E *	7, 10	10*
Chr 11	TH01	7, 8	7, 8
Chr 2	TPOX	8	8
Chr 12	vWA	15, 16	15, 16

*Differences in Penta_E may be from somatic mutation, trisomy or duplication events in selected (Tg) clone.

To submit a sample for STR profiling, go to <https://www.idexbioanalytics.com/authenticate> to obtain a guide on Cell Line Authentication and <https://www.idexbioanalytics.com/cellcheck> to place an order. Request your sample be compared to “PD220 FANCA (IBA# 38010-21-01)”.

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