



Rabbit Anti-PALB2 antibody

SL0588R

Product Name:	PALB2
Chinese Name:	乳腺癌易感基因相关蛋白2
Alias:	DKFZp667I166; 4732427B05; BC066140; DKFZp686E1054; FANCN; FANCN GENE; FLJ21816; OTTMUSP00000025884; PALB2; partner and localizer of BRCA2; RGD1304759; PALB2_HUMAN.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Pig,Cow,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800Flow-Cyt=1µg/TestIF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	131kDa
Cellular localization:	The nucleus
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human PALB2:1101-1186/1186
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	This gene encodes a protein that may function in tumor suppression. This protein binds to and colocalizes with the breast cancer 2 early onset protein (BRCA2) in nuclear foci and likely permits the stable intranuclear localization and accumulation of BRCA2. Essential partner of BRCA2 that promotes the localization and stability of BRCA2. Also enables its recombinational repair and checkpoint functions of BRCA2. May act by

promoting stable association of BRCA2 with nuclear structures, allowing BRCA2 to escape the effects of proteasome-mediated degradation.

Function:

Plays a critical role in homologous recombination repair (HRR) through its ability to recruit BRCA2 and RAD51 to DNA breaks. Serves as the molecular scaffold in the formation of the BRCA1-PALB2-BRCA2 complex which is essential for homologous recombination. Strongly stimulates the DNA strand-invasion activity of RAD51, stabilizes the nucleoprotein filament against a disruptive BRC3-BRC4 polypeptide and helps RAD51 to overcome the suppressive effect of replication protein A (RPA). Functionally cooperates with RAD51AP1 in promoting of D-loop formation by RAD51. Essential partner of BRCA2 that promotes the localization and stability of BRCA2. Also enables its recombinational repair and checkpoint functions of BRCA2. May act by promoting stable association of BRCA2 with nuclear structures, allowing BRCA2 to escape the effects of proteasome-mediated degradation. Binds DNA with high affinity for D loop, which comprises single-stranded, double-stranded and branched DNA structures.

Subunit:

Homooligomer. Oligomerization is essential for its focal accumulation at DNA breaks. Part of a trimeric complex containing BRCA1, BRCA2 and PALB2. Interacts with BRCA1 and this interaction is essential for its function in HRR. Interacts with RAD51, BRCA2, RAD51AP1 and MORF4L1/MRG15.

Subcellular Location:

Nucleus. Note=Colocalizes with BRCA2 in nuclear foci.

DISEASE:

Breast cancer (BC) [MIM:114480]: A common malignancy originating from breast epithelial tissue. Breast neoplasms can be distinguished by their histologic pattern. Invasive ductal carcinoma is by far the most common type. Breast cancer is etiologically and genetically heterogeneous. Important genetic factors have been indicated by familial occurrence and bilateral involvement. Mutations at more than one locus can be involved in different families or even in the same case. Note=Disease susceptibility is associated with variations affecting the gene represented in this entry. Breast cancer susceptibility is strongly associated with PALB2 truncating mutations. Conversely, rare missense mutations do not strongly influence breast cancer risk (PubMed:22241545).

Fanconi anemia complementation group N (FANCN) [MIM:610832]: A disorder affecting all bone marrow elements and resulting in anemia, leukopenia and thrombopenia. It is associated with cardiac, renal and limb malformations, dermal pigmentary changes, and a predisposition to the development of malignancies. At the cellular level it is associated with hypersensitivity to DNA-damaging agents, chromosomal instability (increased chromosome breakage) and defective DNA repair. Note=The disease is caused by mutations affecting the gene represented in this entry.

Pancreatic cancer 3 (PNCA3) [MIM:613348]: A malignant neoplasm of the pancreas. Tumors can arise from both the exocrine and endocrine portions of the pancreas, but

95% of them develop from the exocrine portion, including the ductal epithelium, acinar cells, connective tissue, and lymphatic tissue. Note=The disease is caused by mutations affecting the gene represented in this entry.

Similarity:

Contains 7 WD repeats.

SWISS:

Q86YC2

Gene ID:

79728

Database links:

[Entrez Gene: 79728](#)Human

[Entrez Gene: 233826](#)Mouse

[Entrez Gene: 293452](#)Rat

[Omim: 610355](#)Human

[SwissProt: Q86YC2](#)Human

[SwissProt: Q3U0P1](#)Mouse

[Unigene: 444664](#)Human

[Unigene: 38348](#)Mouse

[Unigene: 43638](#)Rat

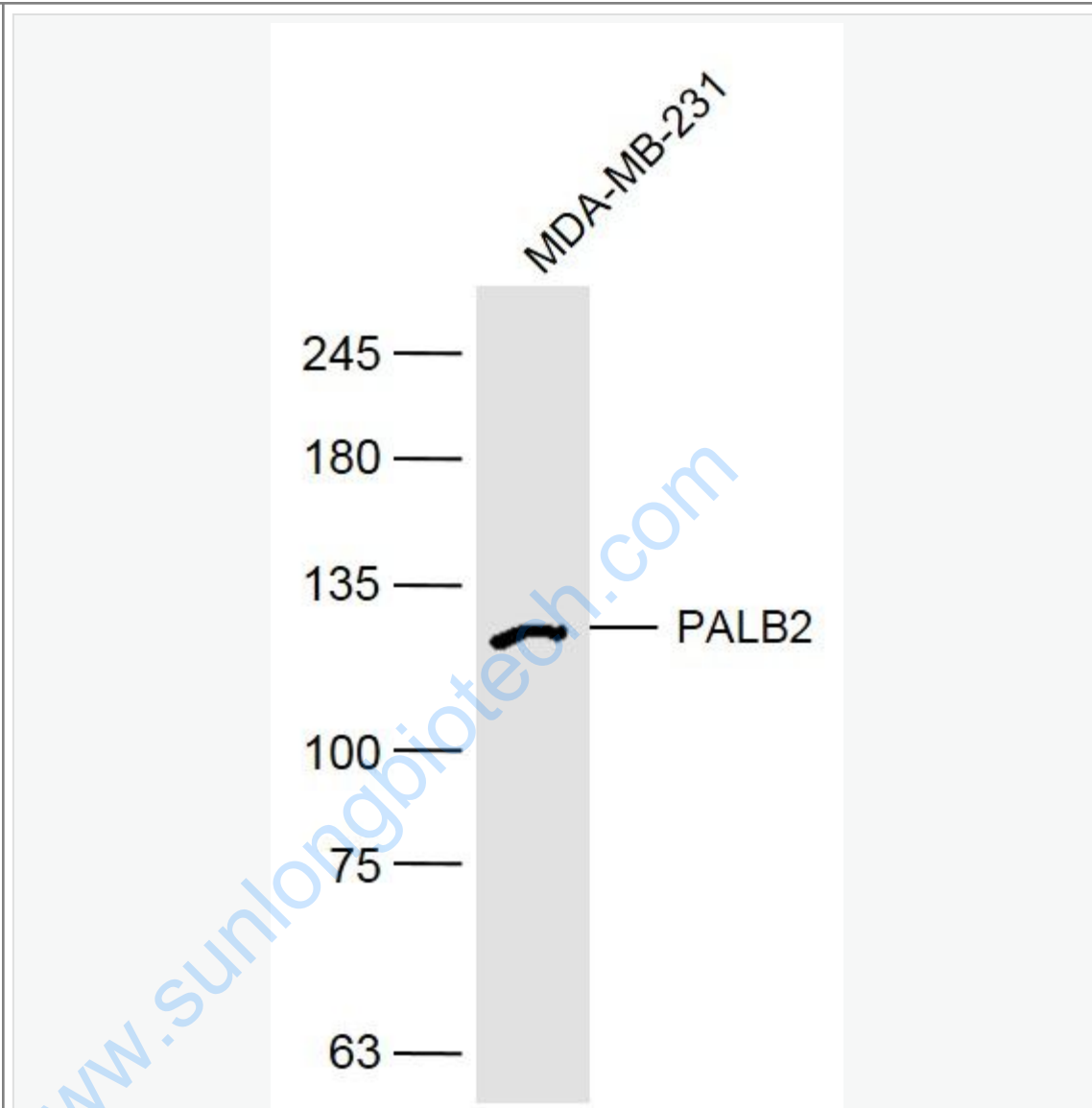
Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

BRCA1, BRCA2和其他已经确定的易感性基因, 只能解释不到一半的乳腺癌已知遗传性易感特征, 芬兰科学家对113个有乳腺癌患者的家族进行了研究。他们在3个家族中发现了一种名为PALB2的基因, 这种基因出现缺陷与家族成员患乳腺癌关系密切。PALB2基因与BRCA2基因在DNA修复中发生作用, 新发现的突变会削弱这一功能。

研究结果表明, PALB2基因出现缺陷使这些家族成员患乳腺癌的危险增加3倍。另外, 这一基因出现缺陷也使这些家族的男性成员患前列腺癌的危险增加。

Picture:



Sample:

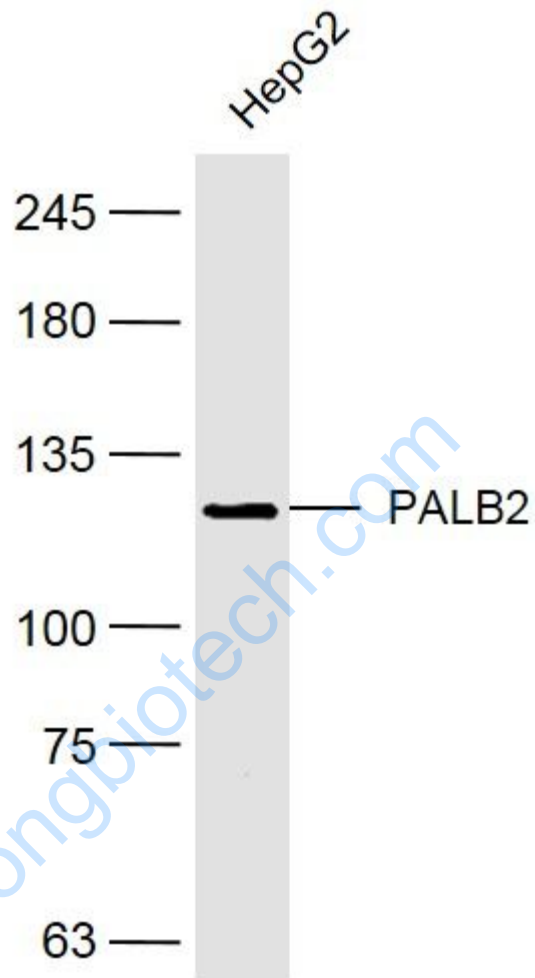
MDA-MB-231(Human) Cell Lysate at 40 ug

Primary: Anti-PALB2 (SL0588R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 131 kD

Observed band size: 131 kD



Sample:

HepG2(Human) Cell Lysate at 40 ug

Primary: Anti-PALB2 (SL0588R) at 1/300 dilution

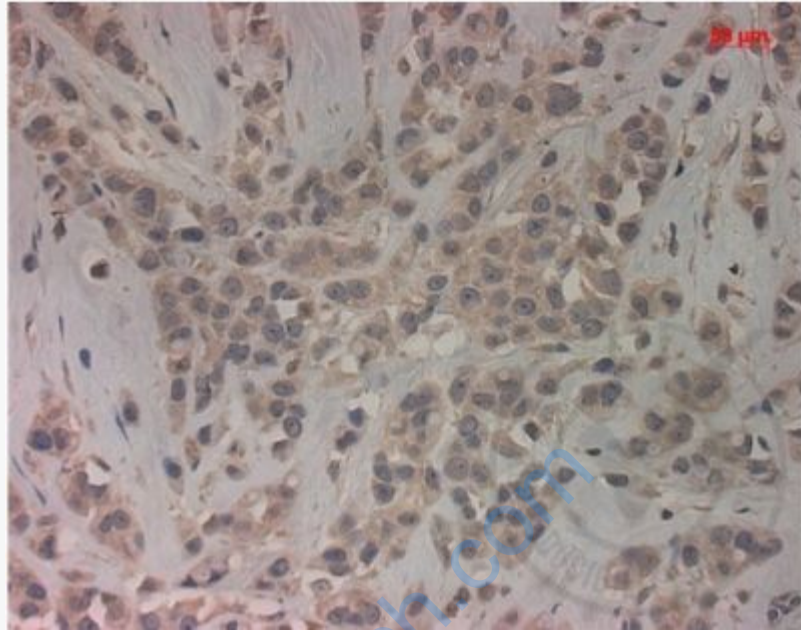
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 131 kD

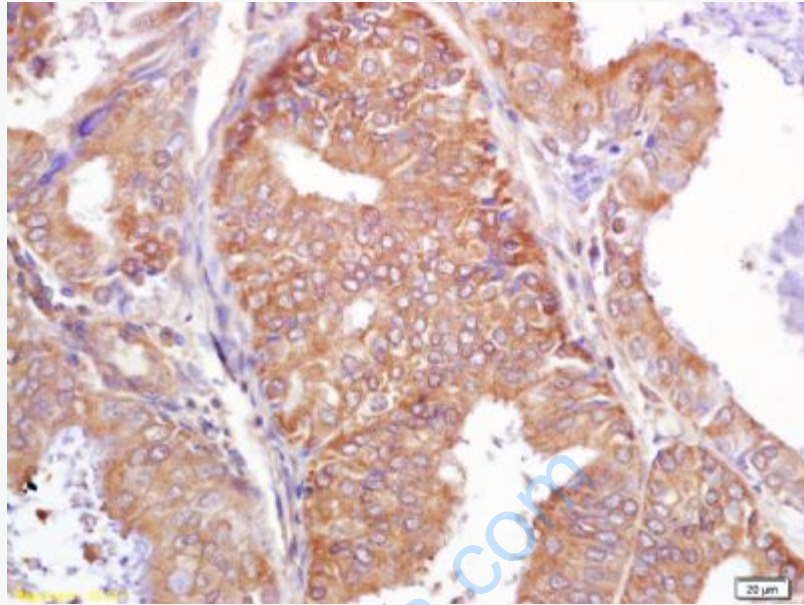
Observed band size: 131 kD



Independently Validated Antibody, image provided by Science Direct, badge number 029682: Formalin-fixed and paraffin embedded pig skeletal muscle labeled with Rabbit Anti-PALB2 Polyclonal Antibody, Unconjugated (SL0588R) at 1:100 for one hour at room temperature followed by conjugation to the secondary antibody Mach2 rabbit HRP-Polymer for 30 min at room temperature and DAB staining.



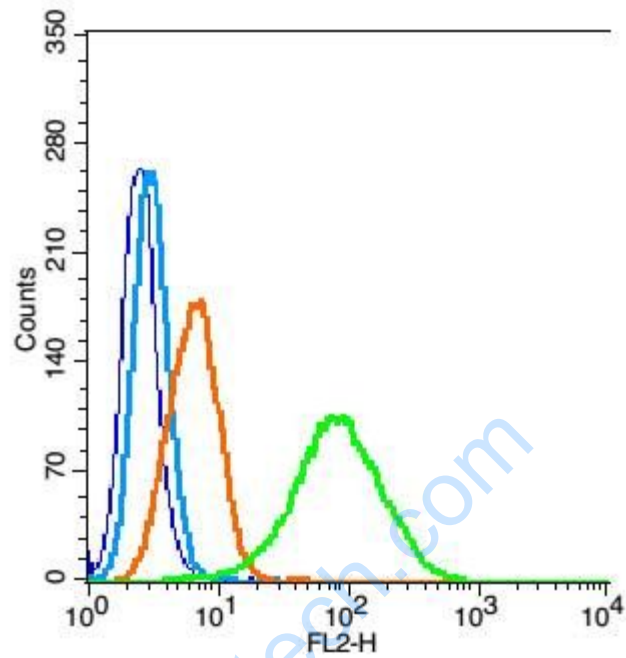
Independently Validated Antibody, image provided by Science Direct, badge number 029682: Formalin-fixed and paraffin embedded human breast cancer labeled with Rabbit Anti-PALB2 Polyclonal Antibody, Unconjugated (SL0588R) at 1:100 from one hour at room temperature followed by conjugation to the secondary antibody Mach2 rabbit HRP-Polymer for 30 minutes at room temperature. Positive Control, the staining is correct.



Tissue/cell: human breast carcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

Incubation: Anti-PALB2 Polyclonal Antibody, Unconjugated(SL0588R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Blank control: Hela(blue), the cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with ice-cold 90% methanol for 30 min on ice..

Isotype Control Antibody: Rabbit IgG(orange) ; Secondary Antibody: Goat anti-rabbit IgG-FITC(white blue), Dilution: 1:100 in 1 X PBS containing 0.5% BSA ;

Primary Antibody Dilution: 1 μ g in 100 μ L 1X PBS containing 0.5% BSA(green).