Anti-BRCA1 antibody

Description	Rabbit polyclonal to BRCA1.

Model	STJ91882
Host	Rabbit
Reactivity	Human
Applications	ELISA, IHC
Immunogen	Synthesized peptide derived from human BRCA1 around the non-phosphorylation site of S988.
Immunogen Region	930-1010 aa
Gene ID	672
Gene Symbol	BRCA1
Dilution range	IHC 1:100-1:300ELISA 1:20000
Specificity	BRCA1 Polyclonal Antibody detects endogenous levels of BRCA1 protein.
Tissue Specificity	Isoform 1 and isoform 3 are widely expressed. Isoform 3 is reduced or absent in several breast and ovarian cancer cell lines.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Breast cancer type 1 susceptibility protein RING finger protein 53 RING-type E3 ubiquitin transferase BRCA1
Molecular Weight	180 kDa

Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:1100OMIM:113705
Alternative Names	Breast cancer type 1 susceptibility protein RING finger protein 53 RING-type E3 ubiquitin transferase BRCA1
Function	E3 ubiquitin-protein ligase that specifically mediates the formation of 'Lys-6'-linked polyubiquitin chains and plays a central role in DNA repair by facilitating cellular responses to DNA damage. It is unclear whether it also mediates the formation of other types of polyubiquitin chains. The E3 ubiquitin-protein ligase activity is required for its tumor suppressor function. The BRCA1-BARD1 heterodimer coordinates a diverse range of cellular pathways such as DNA damage repair, ubiquitination and transcriptional regulation to maintain genomic stability. Regulates centrosomal microtubule nucleation. Required for normal cell cycle progression from G2 to mitosis. Required for appropriate cell cycle arrests after ionizing irradiation in both the S-phase and the G2 phase of the cell cycle. Involved in transcriptional regulation of P21 in response to DNA damage. Required for FANCD2 targeting to sites of DNA damage. May function as a transcriptional regulator. Inhibits lipid synthesis by binding to inactive phosphorylated ACACA and preventing its dephosphorylation. Contributes to homologous recombination repair (HRR) via its direct interaction with PALB2, fine-tunes recombinational repair partly through its modulatory role in the PALB2-dependent loading of BRCA2-RAD51 repair machinery at DNA breaks. Component of the BRCA1-RBBP8 complex which regulates CHEK1 activation and controls cell cycle G2/M checkpoints on DNA damage via BRCA1-mediated ubiquitination of RBBP8. Acts as a transcriptional activator .
Sequence and Domain Family	The BRCT domains recognize and bind phosphorylated pSXXF motif on proteins. The interaction with the phosphorylated pSXXF motif of ABRAXAS1, recruits BRCA1 at DNA damage sites. The RING-type zinc finger domain interacts with BAP1.
Cellular Localization	Nucleus Chromosome Cytoplasm. Localizes at sites of DNA damage at double-strand breaks (DSBs). recruitment to DNA damage sites is mediated by ABRAXAS1 and the BRCA1-A complex . Translocated to the cytoplasm during UV-induced apoptosis . Isoform 3: Cytoplasm.. Isoform 5: Cytoplasm
Post-translational Modifications	Phosphorylation at Ser-308 by AURKA is required for normal cell cycle progression from G2 to mitosis. Phosphorylated in response to IR, UV, and various stimuli that cause checkpoint activation, probably by ATM or ATR. Phosphorylation at Ser-988 by CHEK2 regulates mitotic spindle assembly. Autoubiquitinated, undergoes 'Lys-6'-linked polyubiquitination. 'Lys-6'-linked polyubiquitination does not promote degradation.

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