

AP33262PU-N**Polyclonal Antibody to BRCA1 / RNF53 (N-term) - Aff - Purified****Alternate names:**

Breast cancer type 1 susceptibility protein, RING finger protein 53

Quantity:

0.4 ml

Concentration:

lot specific

Background:

This gene encodes a nuclear phosphoprotein that plays a role in maintaining genomic stability, and it also acts as a tumor suppressor. The encoded protein combines with other tumor suppressors, DNA damage sensors, and signal transducers to form a large multi-subunit protein complex known as the BRCA1-associated genome surveillance complex (BASC). This gene product associates with RNA polymerase II, and through the C-terminal domain, also interacts with histone deacetylase complexes. This protein thus plays a role in transcription, DNA repair of double-stranded breaks, and recombination. Mutations in this gene are responsible for approximately 40% of inherited breast cancers and more than 80% of inherited breast and ovarian cancers. Alternative splicing plays a role in modulating the subcellular localization and physiological function of this gene. Many alternatively spliced transcript variants, some of which are disease-associated mutations, have been described for this gene, but the full-length natures of only some of these variants has been described. A related pseudogene, which is also located on chromosome 17, has been identified. [provided by RefSeq].

Cellular Location: Nucleus. Chromosome (By similarity). Note: Localizes at sites of DNA damage at double-strand breaks (DSBs); recruitment to DNA damage sites is mediated by the BRCA1-A complex Isoform 5: Cytoplasm.

Tissue Location: Isoform 1 and isoform 3 are widely expressed. Isoform 3 is reduced or absent in several breast and ovarian cancer cell lines.

Uniprot ID:[P38398](#)**NCBI:**[9606](#)**Host / Isotype:**

Rabbit / Ig

Immunogen:

KLH conjugated synthetic peptide between 443-472 amino acids from the N-terminal region of Human BRCA1.

Gene name: BRCA1**Format:****State:** Liquid purified Ig fraction**Purification:** Protein A Chromatography, followed by peptide affinity purification**Buffer System:** PBS**Preservatives:** 0.09% (W/V) Sodium Azide**Applications:****Western blot:** 1000.

Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Molecular Weight:

207721 Da

Specificity:

This antibody recognizes Human BRCA1/RNF53 (N-term). Other species not tested.

Storage:

Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General Readings:

1. Matsuoka S, Ballif BA, Smogorzewska A, McDonald ER, Hurov KE, Luo J, et al. ATM and ATR substrate analysis reveals extensive protein networks responsive to DNA damage. *Science*. 2007 May 25;316(5828):1160-6. PubMed PMID: 17525332.
2. Olsen JV, Blagoev B, Gnäd F, Macek B, Kumar C, Mortensen P, et al. Global, in vivo, and site-specific phosphorylation dynamics in signaling networks. *Cell*. 2006 Nov 3;127(3):635-48. PubMed PMID: 17081983.
3. Fabbro M, Savage K, Hobson K, Deans AJ, Powell SN, McArthur GA, et al. BRCA1-BARD1 complexes are required for p53Ser-15 phosphorylation and a G1/S arrest following ionizing radiation-induced DNA damage. *J Biol Chem*. 2004 Jul 23;279(30):31251-8. Epub 2004 May 24. PubMed PMID: 15159397.
4. Ouchi M, Fujiuchi N, Sasai K, Katayama H, Minamishima YA, Ongusaha PP, et al. BRCA1 phosphorylation by Aurora-A in the regulation of G2 to M transition. *J Biol Chem*. 2004 May 7;279(19):19643-8. Epub 2004 Feb 27. PubMed PMID: 14990569.
5. Orban TI, Olah E. Emerging roles of BRCA1 alternative splicing. *Mol Pathol*. 2003 Aug;56(4):191-7. PubMed PMID: 12890739.

Pictures:

Western blot analysis in HeLa cell line lysates using BRCA1 Antibody (N-term) Cat.-No AP33262PU-N (35ug/lane). This demonstrates the BRCA1 antibody detected the BRCA1 protein (arrow).

