Datasheet for ABIN2777874

anti-BRCA1 antibody (Middle Region)

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Overview

Quantity:	100 µL
Target:	BRCA1
Binding Specificity:	Middle Region
Reactivity:	Human, Rat, Mouse, Cow
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This BRCA1 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC)

Product Details

Immunogen:	The immunogen is a synthetic peptide directed towards the middle region of human BRCA1
Sequence:	DDLLDDGEIK EDTSFAENDI KESSAVFSKS VQKGELSRSP SPFTHTHLAQ
Predicted Reactivity:	Cow: 75%, Human: 100%, Mouse: 79%, Rat: 86%
Characteristics:	This is a rabbit polyclonal antibody against BRCA1. It was validated on Western Blot using a cell lysate as a positive control.
Purification:	Affinity Purified

Target Details

Target:	BRCA1
Alternative Name:	BRCA1 (BRCA1 Products)

Target Details

Background:	The BRCA1-BARD1 heterodimer coordinates a diverse range of cellular pathways such as DNA damage repair, ubiquitination and transcriptional regulation to maintain genomic stability. BRCA1 acts by mediating ubiquitin E3 ligase activity that is required for its tumor suppressor function. BRCA1 plays a central role in DNA repair by facilitating cellular response to DNA repair. BRCA1 is required for appropriate cell cycle arrests after ionizing irradiation in both the S-phase and the G2 phase of the cell cycle. BRCA1 is involved in transcriptional regulation of P21 in response to DNA damage. BRCA1 is also required for FANCD2 targeting to sites of DNA damage.It may function as a transcriptional regulator. BRCA1 inhibits lipid synthesis by binding to inactive phosphorylated ACACA and preventing its dephosphorylation.This gene encodes a nuclear phosphoprotein that plays a role in maintaining genomic stability and 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 BASC for BRCA1-associated genome surveillance complex. This gene product associates with RNA polymerase II, and through the C-terminal domain, also interacts with histone deacetylase complex. 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 have been described for this gene but only some have had their full-length natures identified. Alias Symbols: BRCAI, BRCC1, IRIS, PSCP, RNF53, PNCA4, BROVCA1, PPP1R53 Protein Interaction Partner: RAD50, MED17, RAD51, YAP3, HDA3, SSN3, BEM4, GYP5, YAF9, HDAC2, MSH6, BAP1, SUPT5H, POLR2A, NPR1, NUP53, MET18, CDC21, MLP1, CTK1, MSH2, BACH1, DAN1, TMA22, BBC1, RPB4, SPT4, YGR053C, ATE1, YBP2, SLI15, RAD16, XRS2, RAD55, BUR2, BRIP1, ESR1, BECN1, HIST1H Protein Size: 1863
Molecular Weight:	208 kDa
Gene ID:	672
NCBI Accession:	NM_007294, NP_009225
UniProt:	P38398
Pathways:	Cell Division Cycle, DNA Damage Repair, Intracellular Steroid Hormone Receptor Signaling Pathway, Positive Regulation of Response to DNA Damage Stimulus

Application Details

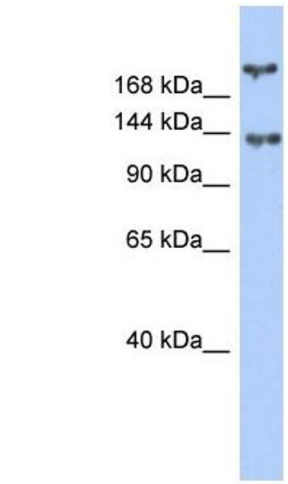
Application Notes:	Optimal working dilutions should be determined experimentally by the investigator.
Comment:	Antigen size: 1863 AA
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	Lot specific
Buffer:	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09 % (w/v) sodium azide and 2 % sucrose.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-20 °C
Storage Comment:	For short term use, store at 2-8°C up to 1 week. For long term storage, store at -20°C in small aliquots to prevent freeze-thaw cycles.

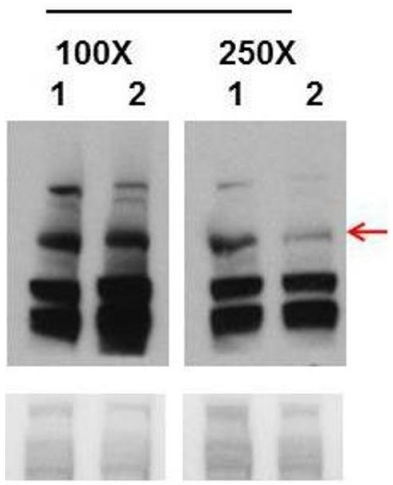
Publications

Product cited in:	Evans, Shenton, Woodward, Lalloo, Howell, Maher: "Penetrance estimates for BRCA1 and BRCA2 based on genetic testing in a Clinical Cancer Genetics service setting: risks of breast/ovarian cancer quoted should reflect the cancer burden in the family." in: **BMC cancer**, Vol. 8, pp. 155, (2008) (PubMed).



Western Blotting

Image 1. WB Suggested Anti-BRCA1 Antibody Titration: 0.2-1 ug/ml ELISA Titer: 1:312500 Positive Control: Human Small Intestine



Immunohistochemistry

Image 2. Western Blot with Cell line 293T (Embyonic human kidney cells) tissue

