

## Datasheet: MCA5946GT

**BATCH NUMBER 170105**

<b>Description:</b>	MOUSE ANTI BRCA1
<b>Specificity:</b>	BRCA1
<b>Other names:</b>	BREAST CANCER TYPE 1 SUSCEPTIBILITY PROTEIN
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	17F8
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	50 µg

## Product Details

### Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit [www.bio-rad-antibodies.com/protocols](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			▪	
Immunohistology - Frozen			▪	
Immunohistology - Paraffin	▪			
ELISA	▪			
Immunoprecipitation	▪			
Western Blotting	▪			1.0 - 10.0ug/ml
Immunofluorescence	▪			1.0ug/ml

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

<b>Target Species</b>	Human
<b>Species Cross Reactivity</b>	<p>Reacts with: Mouse</p> <p><b>N.B.</b> Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.</p>
<b>Product Form</b>	Purified IgG - liquid

<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein G
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	0.09% Sodium Azide (NaN <sub>3</sub> )
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml
<b>Immunogen</b>	<i>E.coli</i> expressed BRCA1 protein fragment corresponding to amino acids 762-1315
<b>External Database Links</b>	<p><b>UniProt:</b></p> <p><a href="#">P38398</a>    <a href="#">Related reagents</a></p> <p><a href="#">P48754</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b></p> <p><a href="#">672</a>    BRCA1    <a href="#">Related reagents</a></p> <p><a href="#">12189</a>    Brca1    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	RNF53
<b>Fusion Partners</b>	Spleen cells from immunised mice were fused with cells of the mouse NS1 myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti BRCA1, clone 17F8</b> recognizes both human and mouse BRCA1, otherwise known as breast cancer type 1 susceptibility protein, a tumor suppressor gene and major player in DNA damage repair, predominantly expressed in the nucleus during the S/G2 phase of the cell cycle.</p> <p>Along with BRCA2, BRCA1 is a high risk gene which is associated with hereditary breast and ovarian cancers, particularly at a younger age of diagnosis. Women carrying the BRCA1 mutation have a 50-95% chance of developing breast cancer in later life, but genetic screening and increased awareness of preventative surgery can reduce this risk significantly (<a href="#">Yamauchi et al. 2018</a>). Deleterious BRCA1 mutations may also increase the risk of other cancers in both males and females including pancreatic cancer, although in males pancreatic and prostate cancer appear to be more strongly associated with BRCA2 gene mutations.</p> <p>BRCA1 is a key marker of triple-negative breast cancer/TNBC (ER-/PR-/HER2-), a high risk aggressive cancer which makes up about 15% of invasive breast cancers, and which lacks the benefit of specific therapy that targets the three major proteins ER/PR/HER2. Triple-negative tumors are predominantly basal-like, poorly differentiated and of higher <a href="#">histological grade</a>. Younger women have an increased rate of basal or BRCA related TNBC, compared with the higher proportion of apocrine, normal-like and rare subtypes of TNBC, seen in older women.</p>

Mouse anti BRCA1, clone17F8 recognizes full length 220 kDa BRCA1, but not the delta exon 11 splice variant.

Mouse anti BRCA1, clone17F8 is well documented for use in immunohistochemistry and immunofluorescence staining, showing that this antibody labels both cytoplasmic BRCA1 and the centromeric region (overlapping with the nucleus), and exhibits cytoplasmic staining of BRCA1 in breast cancer cell lines and nuclear staining in several non-breast cancer cell lines ([Lee, et al. 1998](#)).

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**Histology Positive Control Tissue**

Breast carcinoma

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**References**

1. Lee, W.H. *et al.* (1998) Biological functions of the BRCA1 protein. [Breast Dis. 10: 11-22](#)
2. Maul, G.G. *et al.* (1998) Nuclear redistribution of BRCA1 during viral infection. [Cell Growth Differ. 9 \(9\): 743-55.](#)
3. Zhong, Q. *et al.* (1999) Association of BRCA1 with the hRad50-hMre11-p95 complex and the DNA damage response. [Science. 285 \(5428\): 747-50.](#)

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**Storage**

Store at +4°C or at -20°C if preferred.

This product should be stored undiluted.

Storage in frost free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

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**Guarantee**

12 months from date of despatch

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**Health And Safety Information**

Material Safety Datasheet documentation #10040 available at: <https://www.bio-rad-antibodies.com/SDS/MCA5946GT>  
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**Regulatory**

For research purposes only

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## Related Products

### Recommended Secondary Antibodies

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|---|---|
| Rabbit Anti Mouse IgG (STAR12...)       | <a href="#">RPE</a>   |
| Goat Anti Mouse IgG IgA IgM (STAR87...) | <a href="#">HRP</a>   |
| Goat Anti Mouse IgG (STAR76...)         | <a href="#">RPE</a>   |
| Rabbit Anti Mouse IgG (STAR13...)       | <a href="#">HRP</a>   |
| Goat Anti Mouse IgG (STAR70...)         | <a href="#">FITC</a>  |
| Goat Anti Mouse IgG (H/L) (STAR117...)  | <a href="#">Alk. Phos.</a> , <a href="#">DyLight®488</a> , <a href="#">DyLight®550</a> ,<br><a href="#">DyLight®650</a> , <a href="#">DyLight®680</a> , <a href="#">DyLight®800</a> ,<br><a href="#">FITC</a> , <a href="#">HRP</a> |
| Rabbit Anti Mouse IgG (STAR9...)        | <a href="#">FITC</a>  |
| Goat Anti Mouse IgG (STAR77...)         | <a href="#">HRP</a>   |

Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)

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