

## Datasheet: MCA1974GA

**BATCH NUMBER 157762**

<b>Description:</b>	MOUSE ANTI HUMAN ESTROGEN RECEPTOR BETA 1
<b>Specificity:</b>	ESTROGEN RECEPTOR BETA 1
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	PPG5/10
<b>Isotype:</b>	IgG2a
<b>Quantity:</b>	0.1 mg

## 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 (1)	▪			
ELISA			▪	
Immunoprecipitation			▪	
Western Blotting		▪		
Immunofluorescence	▪			

Where this product 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 product for use in their own system using appropriate negative/positive controls.

**(1) This product requires antigen retrieval using heat treatment prior to staining of paraffin sections;**

**0.05M glycine/EDTA pH 8.0 see [\(See Carpino et al.\)](#) or sodium citrate buffer pH 6.0 are recommended for this purpose.**

### Target Species

Human

### Species Cross Reactivity

Reacts with: Primate, New World primate, Llama, Rat, Marmoset, Pig, Sheep, Cynomolgus monkey, Rhesus Monkey, Turtle, Goose

**N.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.

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<b>Product Form</b>	Purified IgG - liquid
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<b>Buffer Solution</b>	Phosphate buffered saline
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<b>Preservative Stabilisers</b>	0.09% Sodium Azide
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<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml
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<b>Immunogen</b>	Synthetic peptide sequence CSPAEEDSKSKEGSQNPQSQ from the C-terminal region of the human estrogen receptor beta 1 isoform.
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<b>External Database Links</b>	<b>UniProt:</b> <a href="#">Q92731</a> <a href="#">Related reagents</a>  <b>Entrez Gene:</b> <a href="#">2100</a> ESR2 <a href="#">Related reagents</a>
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<b>Synonyms</b>	ESTRB, NR3A2
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<b>Fusion Partners</b>	Spleen cells from immunised BALB/c mice were fused with cells of the mouse SP2/0 myeloma cell line.
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<b>Specificity</b>	<p><b>Mouse anti Human estrogen receptor beta 1, clone PPG5/10</b> recognizes the estrogen receptor beta 1 (ERB1), one of several isoforms of estrogen receptor (ER) which can be used in conjunction with progesterone receptor (PR) and HER2/neu (CD340), to help determine both prognosis and the effectiveness of hormonal therapy, in breast cancer patients. Prognosis and survival rate varies greatly depending on cancer type, stage and treatment.</p> <p>Mouse anti Human estrogen receptor beta 1, clone PPG5/10 is increasingly being utilized in the immunohistochemical staining of formal fixed paraffin embedded tissue, in preference to ligand binding assays, for the detection of ER/PR. ER/PR is present in approximately 75% to 80% of breast tumors, and breast cancer cells with these receptors depend on the hormones estrogen and/or progesterone to grow (<a href="#">Saunders <i>et al.</i>, 2002</a> and <a href="#">Nelson <i>et al.</i>, 2017</a>).</p> <p>Mouse anti Human estrogen receptor beta 1, clone PPG5/10 can be used to demonstrate the nuclear presence of ERB1 within cells of the breast (<a href="#">Shaaban <i>et al.</i>, 2008</a>), ovary, uterus, oviduct, testis, prostate, bladder and male reproductive ducts.</p>
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<b>Histology Positive Control Tissue</b>	Ovary or breast carcinoma
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## References

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2. Torlakovic, E. *et al.* (2002) Prostate carcinoma expression of estrogen receptor-beta as detected by PPG5/10 antibody has positive association with primary Gleason grade and Gleason score. [Hum Pathol. 33 \(6\): 646-51.](#)
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5. Wong NA *et al.* (2005) ERbeta isoform expression in colorectal carcinoma: an *in vivo* and *in vitro* study of clinicopathological and molecular correlates. [J Pathol. 207 \(1\): 53-60.](#)
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7. Wood, C.E. *et al.* (2006) Hyperplastic and neoplastic lesions of the mammary gland in macaques. [Vet Pathol. 43 \(4\): 471-83.](#)
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<b>Further Reading</b>	<p>1. Nelson, A.W. <i>et al.</i> (2017) Comprehensive assessment of estrogen receptor beta antibodies in cancer cell line models and tissue reveals critical limitations in reagent specificity. <a href="#">Mol Cell Endocrinol. 440: 138-150.</a></p> <p>2. Andersson, S. <i>et al.</i> (2017) Insufficient antibody validation challenges oestrogen receptor beta research. <a href="#">Nat Commun. 8: 15840.</a></p>
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<b>Storage</b>	<p>Store at +4°C or at -20°C if preferred.</p> <p>This product should be stored undiluted.</p> <p>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.</p>
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<b>Guarantee</b>	12 months from date of despatch
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<b>Health And Safety Information</b>	<p>Material Safety Datasheet documentation #10040 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA1974GA">https://www.bio-rad-antibodies.com/SDS/MCA1974GA</a></p> <p>10040</p>
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<b>Regulatory</b>	For research purposes only
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## Related Products

### Recommended Secondary Antibodies

Rabbit Anti Mouse IgG (STAR12...) [RPE](#)

Goat Anti Mouse IgG IgA IgM (STAR87...) [HRP](#)  
Goat Anti Mouse IgG (STAR76...) [RPE](#)  
Goat Anti Mouse IgG (STAR70...) [FITC](#)  
Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight®488](#), [DyLight®550](#),  
[DyLight®650](#), [DyLight®680](#), [DyLight®800](#),  
[FITC](#), [HRP](#)  
Rabbit Anti Mouse IgG (STAR13...) [HRP](#)  
Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)  
Rabbit Anti Mouse IgG (STAR9...) [FITC](#)  
Goat Anti Mouse IgG (STAR77...) [HRP](#)

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To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://bio-rad-antibodies.com/datasheets)  
'M366037:200529'

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