

## Datasheet: MCA4676GA

<b>Description:</b>	MOUSE ANTI HUMAN ESTROGEN RECEPTOR BETA 5
<b>Specificity:</b>	ESTROGEN RECEPTOR BETA 5
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	5/25
<b>Isotype:</b>	IgG1
<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	▪			

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. Sodium citrate buffer pH 6.0 is recommended for this purpose.**

<b>Target Species</b>	Human
<b>Product Form</b>	Purified IgG - liquid
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	0.1% Sodium Azide (NaN <sub>3</sub> )

<b>Approx. Protein Concentrations</b>	IgG concentration 1.0mg/ml
<b>Immunogen</b>	Tuberculin conjugated synthetic peptide LLSHVRHARYAP derived from the C-terminus of human ERB5.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">Q92731</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">2100</a>    ESR2    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	ESTRB, NR3A2
<b>RRID</b>	AB_2102387
<b>Specificity</b>	<p><b>Mouse anti human estrogen receptor beta 5, clone 5/25</b> recognizes human estrogen receptor beta 5 (ERB5), a splice variant of the nuclear receptor hormone ERbeta (ESR2), one of at least five isoforms (<a href="#">Moore et al. 1998</a>). Although only the ERB1 variant appears fully functional, the remaining isoforms have been shown to form heterodimers with ERB1, thereby enhancing transcription (<a href="#">Shaaban et al. 2008</a>).</p> <p>ERB5 is expressed in normal colorectal tissue, and is present in primary colorectal carcinomas (<a href="#">Wong et al. 2005</a>).</p> <p>The detection of estrogen (ER) and progesterone (PR) receptors using immunohistochemical staining of formal fixed paraffin embedded (FFPE) tissue, has gradually replaced ligand binding assays (LBA), to become the most common method for the determination of the ER/PR status of breast tumors. Approximately 75% to 80% of breast tumors have estrogen and/or progesterone receptors, and the presence of these receptors helps determine both the patient's prognosis and the effectiveness of hormonal therapy transcription (<a href="#">Shaaban et al. 2008</a>, <a href="#">Collins et al. 2009</a>).</p>
<b>Histology Positive Control Tissue</b>	Normal colon or colon carcinoma
<b>References</b>	<ol style="list-style-type: none"> <li>1. Wong, N.A. <i>et al.</i> (2005) ERbeta isoform expression in colorectal carcinoma: an in vivo and in vitro study of clinicopathological and molecular correlates. <a href="#">J Pathol. 207 (1): 53-60.</a></li> <li>2. Shaaban, A.M. <i>et al.</i> (2008) Nuclear and cytoplasmic expression of ERbeta1, ERbeta2, and ERbeta5 identifies distinct prognostic outcome for breast cancer patients. <a href="#">Clin Cancer Res. 14 (16): 5228-35.</a></li> <li>3. Collins, F. <i>et al.</i> (2009) Expression of oestrogen receptors, ERalpha, ERbeta, and ERbeta variants, in endometrial cancers and evidence that prostaglandin F may play a role in regulating expression of ERalpha. <a href="#">BMC Cancer. 9: 330.</a></li> <li>4. Ciucci, A. <i>et al.</i> (2014) Gender effect in experimental models of human medulloblastoma: does the estrogen receptor <math>\beta</math> signaling play a role? <a href="#">PLoS One. 9 (7): e101623.</a></li> </ol>

5. Zannoni, G.F. *et al.* (2016) Sexual dimorphism in medulloblastoma features. [Histopathology. 68 \(4\): 541-8.](#)
6. Li, S.Y. *et al.* (2015) Cytoplasm estrogen receptor  $\beta 5$  as an improved prognostic factor in thymoma and thymic carcinoma progression. [Oncol Lett. 10 \(4\): 2341-6.](#)
7. Ciucci, A. *et al.* (2018) Estrogen receptor  $\beta$ : Potential target for therapy in adult granulosa cell tumors? [Gynecol Oncol. 150 \(1\): 158-65.](#)
8. Bai, Y. *et al.* (2018) Oestrogen receptor  $\beta 5$  and epidermal growth factor receptor synergistically promote lung cancer progression. [Autoimmunity. 51 \(4\): 157-165.](#)
9. Wang, M. *et al.* (2019) The alteration of ER $\beta 5$  and collagen metabolism is relevant to the development of stress urinary incontinence [Int J Clin Exp Med 12\(5\): 5154-61.](#)
10. Ciucci, A. *et al.* (2014) Prognostic significance of the estrogen receptor beta (ER $\beta$ ) isoforms ER $\beta 1$ , ER $\beta 2$ , and ER $\beta 5$  in advanced serous ovarian cancer. [Gynecol Oncol. 132 \(2\): 351-9.](#)
11. Younes, M. *et al.* (2018) Expression of estrogen receptor beta isoforms in pancreatic adenocarcinoma. [Oncotarget. 9 \(102\): 37715-20.](#)
12. Hexiao, T. *et al.* (2021) Knockdown of CENPF inhibits the progression of lung adenocarcinoma mediated by ER $\beta 2/5$  pathway. [Aging \(Albany NY\). 13 \(2\): 2604-25.](#)

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**Storage** This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.

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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/MCA4676GA>  
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**Regulatory** For research purposes only

## Related Products

### Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR77...)	<a href="#">HRP</a>
Rabbit Anti Mouse IgG (STAR12...)	<a href="#">RPE</a>
Rabbit Anti Mouse IgG (STAR8...)	<a href="#">DyLight@800</a>
Goat Anti Mouse IgG (STAR70...)	<a href="#">FITC</a>
Goat Anti Mouse IgG IgA IgM (STAR87...)	<a href="#">Alk. Phos.</a> , <a href="#">HRP</a>
Rabbit Anti Mouse IgG (STAR9...)	<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> , <a href="#">DyLight@650</a> , <a href="#">DyLight@680</a> , <a href="#">DyLight@800</a> , <a href="#">FITC</a> , <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 (Fc) (STAR120...) [FITC](#), [HRP](#)

## Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL \(MCA928\)](#)

**North & South** Tel: +1 800 265 7376

**America** Fax: +1 919 878 3751

Email: [antibody\\_sales\\_us@bio-rad.com](mailto:antibody_sales_us@bio-rad.com)

**Worldwide**

Tel: +44 (0)1865 852 700

Fax: +44 (0)1865 852 739

Email: [antibody\\_sales\\_uk@bio-rad.com](mailto:antibody_sales_uk@bio-rad.com)

**Europe**

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Email: [antibody\\_sales\\_de@bio-rad.com](mailto:antibody_sales_de@bio-rad.com)

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)

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