

Datasheet: MCA2279

BATCH NUMBER 167807

Description:	MOUSE ANTI HUMAN ESTROGEN RECEPTOR BETA 2
Specificity:	ESTROGEN RECEPTOR BETA 2
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	57/3
Isotype:	IgG1
Quantity:	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.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			▪	
Immunohistology - Frozen			▪	
Immunohistology - Paraffin (1)	▪			1/50 - 1/500
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. Glycine/ EDTA preparations have also been used with success in some tissues

Target Species	Human
Product Form	Purified IgG - liquid
Preparation	Purified IgG from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative	<0.1% sodium azide (NaN ₃)

Stabilisers

Approx. Protein Concentrations IgG concentration 1.0mg/ml

Immunogen Synthetic peptide derived from the C terminus of the human estrogen receptor beta 2 isomer, CGMKMETLLPEATMEQ.

External Database Links

UniProt:

[Q92731](#) [Related reagents](#)

Entrez Gene:

[2100](#) ESR2 [Related reagents](#)

Synonyms ESTRB, NR3A2

RRID AB_2231563

Fusion Partners Spleen cells from immunized Balb/c mice were fused with cells of the SP2/0 myeloma cell line.

Specificity **Mouse anti Human Estrogen Receptor beta 2 antibody, clone 57/3** recognizes the estrogen receptor beta 2 isoform, expressed in cell nuclei of a range of human tissues including the ovary, placenta, testis and vas deferens. No cross-reactivity is seen with estrogen receptor beta 1 isoform.

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

Histology Positive Control Tissue Human testis

- References**
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 2. Critchley, H.O. *et al.* (2002) Wild-type estrogen receptor (ERbeta1) and the splice variant (ERbetacx/beta2) are both expressed within the human endometrium throughout the normal menstrual cycle. [J Clin Endocrinol Metab. 87 \(11\): 5265-73.](#)
 3. Gaskell, T.L. *et al.* (2003) Differential expression of two estrogen receptor beta isoforms in the human fetal testis during the second trimester of pregnancy. [J Clin Endocrinol Metab. 88 \(1\): 424-32.](#)
 4. Wong, N.A. *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.](#)

5. Carpino, A. *et al.* (2007) Detection of aromatase and estrogen receptors (ERalpha, ERbeta1, ERbeta2) in human Leydig cell tumor. [Eur J Endocrinol. 157 \(2\): 239-44.](#)
6. Collins, F. *et al.* (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. [BMC Cancer. 9: 330.](#)
7. Skliris, G.P. *et al.* (2006) Expression of oestrogen receptor-beta in oestrogen receptor-alpha negative human breast tumours. [Br J Cancer. 95 \(5\): 616-26.](#)
8. Miller, W.R. *et al.* (2006) Oestrogen receptor beta and neoadjuvant therapy with tamoxifen: prediction of response and effects of treatment. [Br J Cancer. 94 \(9\): 1333-8.](#)
9. Rago, V. *et al.* (2009) Identification of ERbeta1 and ERbeta2 in human seminoma, in embryonal carcinoma and in their adjacent intratubular germ cell neoplasia. [Reprod Biol Endocrinol. 7: 56.](#)
10. Ciucci, A. *et al.* (2014) Gender effect in experimental models of human medulloblastoma: does the estrogen receptor β signaling play a role? [PLoS One. 9 \(7\): e101623.](#)
11. Ciucci, A. *et al.* (2015) Mitochondrial estrogen receptor β 2 drives antiapoptotic pathways in advanced serous ovarian cancer. [Hum Pathol. 46 \(8\): 1138-46.](#)
12. Zannoni, G.F. *et al.* (2016) Sexual dimorphism in medulloblastoma features. [Histopathology. 68 \(4\): 541-8.](#)
13. Buttarelli, M. *et al.* (2017) Hormone receptor expression profile of low-grade serous ovarian cancers. [Gynecol Oncol. Feb 20. pii: S0090-8258\(17\)30150-6. \[Epub ahead of print\]](#)
14. Ciucci, A. *et al.* (2018) Estrogen receptor β : Potential target for therapy in adult granulosa cell tumors? [Gynecol Oncol. 150 \(1\): 158-65.](#)
15. Younes, M. *et al.* (2018) Expression of estrogen receptor beta isoforms in pancreatic adenocarcinoma. [Oncotarget. 9 \(102\): 37715-37720.](#)
16. Ciucci, A. *et al.* (2014) Prognostic significance of the estrogen receptor beta (ER β) isoforms ER β 1, ER β 2, and ER β 5 in advanced serous ovarian cancer. [Gynecol Oncol. 132 \(2\): 351-9.](#)
17. Hexiao, T. *et al.* (2021) Knockdown of CENPF inhibits the progression of lung adenocarcinoma mediated by ER β 2/5 pathway. [Aging \(Albany NY\). 13 \(2\): 2604-25.](#)
18. Kaya, E.C. *et al.* (2022) Expression of Estrogen Receptor Beta 2 in Laryngeal Cancer and Its Relationship with Lymph Node Metastasis [B-ENT. 11 May \[Epub ahead of print\].](#)
19. Hu, M. *et al.* (2019) Uterine glycolytic enzyme expression is affected by knockout of different estrogen receptor subtypes. [Biomed Rep. 11 \(4\): 135-44.](#)

Further Reading

1. Scobie, G.A. *et al.* (2002) Human oestrogen receptors: differential expression of ER alpha and beta and the identification of ER beta variants. [Steroids. 67 \(12\): 985-92.](#)

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.

Guarantee

12 months from date of despatch

Health And Safety Information Material Safety Datasheet documentation #10040 available at:
<https://www.bio-rad-antibodies.com/SDS/MCA2279>
10040

Regulatory For research purposes only

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](#)
Rabbit Anti Mouse IgG (STAR13...) [HRP](#)
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 (STAR9...) [FITC](#)
Goat Anti Mouse IgG (STAR77...) [HRP](#)
Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)

Recommended Negative Controls

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

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: 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	Europe	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com
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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://www.bio-rad-antibodies.com/datasheets)
'M426381:231221'

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