Datasheet: MCA2279GT

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:	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.

	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. 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 Stabilisers	< 0.1% sodium azide (NaN_3)

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_2262592
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	1. Saunders, P.T. *et al.* (2002) ERbeta1 and the ERbeta2 splice variant (ERbetacx/beta2) are expressed in distinct cell populations in the adult human testis. J Clin Endocrinol Metab. 87 (6): 2706-15. 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.
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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 β2 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 (ERβ) isoforms ERβ1, ERβ2, and ERβ5 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 ERβ2/5 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

Material Safety Datasheet documentation #10040 available at:

Information	https://www.bio-rad-antibodies.com/SDS/MCA2279GT 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

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets

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