Aeonian Biotech
Your choice for selective antibodies

Cat nr   AE00272

Product Datasheet

Mouse Monoclonal Antibody, clone ESR1/1904 to:

ESR1, Estrogen receptor 1

Estrogen receptor-1; Estrogen receptor alpha; Estrogen receptor-alpha; ERalpha, ER-alpha; Estradiol receptor; Nuclear receptor subfamily 3 group A member 1; ER; ESR; ESRA; ESTRR; Era; NR3A1

Cellular localization	Nucleus
Official Symbol (Gene)	ESR1
GeneID	2099
SwissProt	P03372
Confirmed Applications	IHC, PA, WB
Positive controls	MCF7, ER-type breast carcinoma
Aeonian Rating©	80
Purification	By Protein A from bioreactor concentrate
Formulation	200ug IgG/ml in PBS, 0.05% BSA, 0.05% azide (20ug or 100ug)
	1mg IgG/ml in PBS (100ug or contact us for quotation)
Amount	☐ 20ug ☐ 100ug
Isotype	Mouse IgG2a, kappa
Confirmed species reactivity	Human
Immunogen	Recombinant full length ESR1 protein
Epitope	Unknown

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Storage instructions	Avoid repeated freeze/thaw cycles. For long term storage, keep small aliquots at -20C or -80C and keep one aliquot at 4C for daily experimentations. Azide will preserve antibody at 4C for 6-12 months, when kept away from direct sun light.
Expiration	Integrity warranted for 24 months after purchase when handled and stored according to instructions, see below.
Warranty	This product is only warranted for the specifications as described in this product sheet and only when the product is handled and stored according to instructions. User should validate this antibody in the application and tissue/cell type as required, after confirmation of integrity upon receipt is obtained by reproducing the performance as described below. Should such confirmation not be attempted, any warranty is void. In case of non-conformance, user needs to contact us immediately for replacement or refund.
Liability	This product is for in vitro research use only. Any other applications, such as diagnostics or therapeutics, or in vivo experiments, and the validation of this product therein, are solely at the responsibility of the buyer/user.
Product performance	see next pages

Product data:

ImmunoHistoChemistry (IHC):
This product shows nuclear staining in human endometrial carcinoma and breast carcinoma sections.
Recommended concentration: 1-3ug/ml
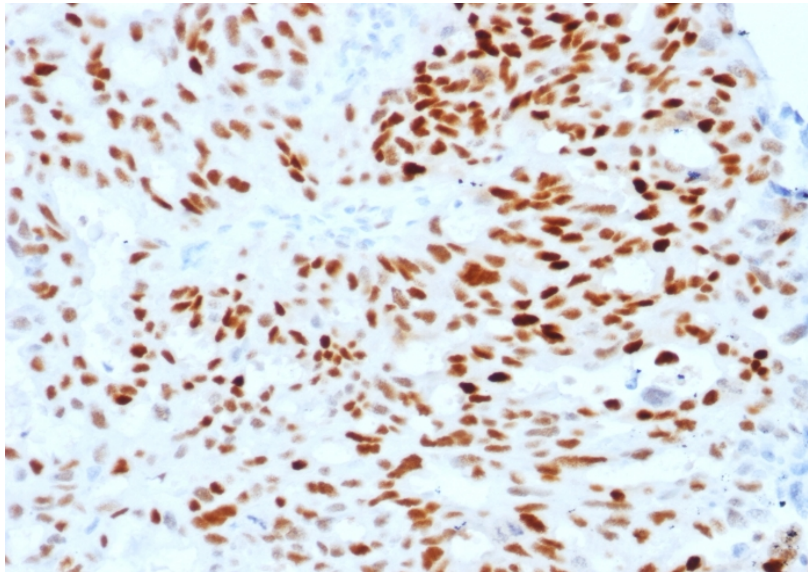
Formaldehyde-fixed, paraffin-embedded human endometrial carcinoma stained with ESR1 Mouse Monoclonal Antibody AE00272 at 1-2ug/ml for 30 minutes at RT. Epitope retrieval: Boiling at pH6 for 10-20 min followed by 20 min cooling. DAB staining by HRP polymer.
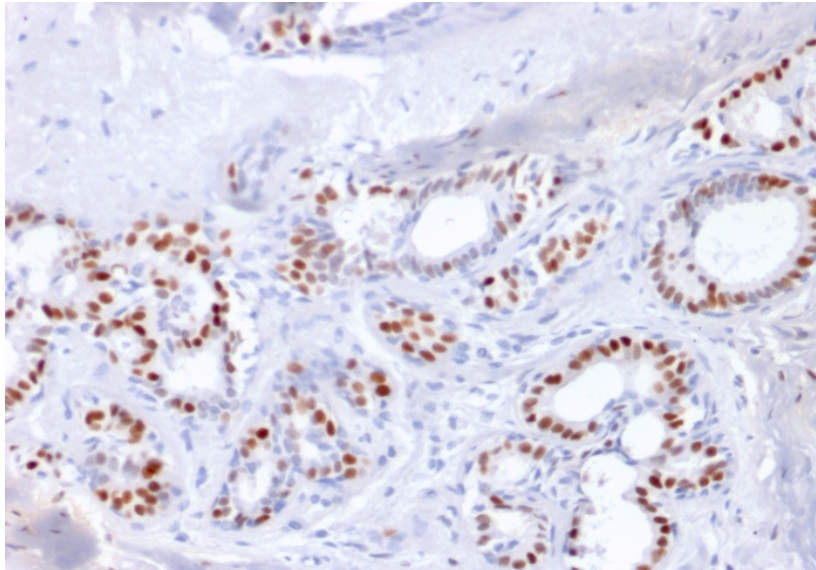
Formaldehyde-fixed, paraffin-embedded human breast carcinoma stained with ESR1 Mouse Monoclonal Antibody AE00272 at 1-2ug/ml for 30 minutes at RT. Epitope retrieval: Boiling at pH6 for 10-20 min followed by 20 min cooling. DAB staining by HRP polymer.

Western Blot (WB):
This product was successfully used to stain an approx. 65kDa band in lysates of cell line MCF7.
Recommended concentration: 0.3-1ug/ml
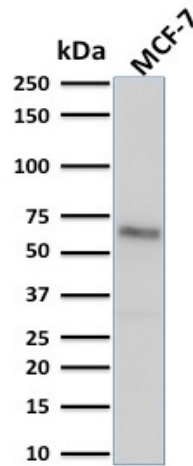
Western Blot of MCF7 lysate (30ug) stained with ESR1 Mouse Monoclonal Antibody AE00272 at 0.5ug/ml (1h at ambient temp). ECL staining by HRP.

SDS-PAGE Analysis of Purified ESR1 Mouse Monoclonal Antibody AE00272. Confirmation of Purity and Integrity of Antibody.
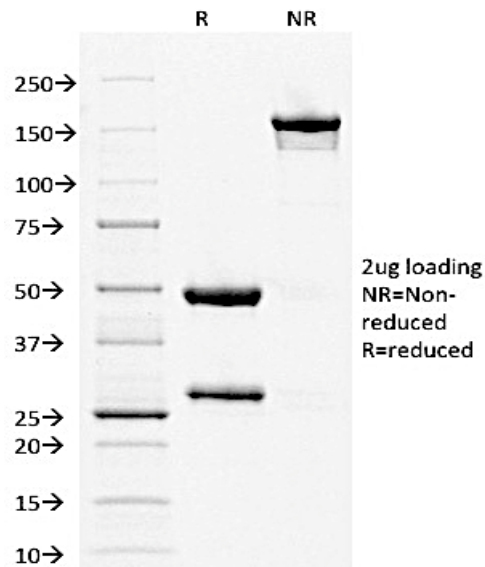
Integrity of the purified antibody AE00272 under non-reduced and reduced conditions, showing intact IgG at around 150kDa (NR) and intact heavy and light chains at 50kDa and 28kDa resp. (R).

Specificity and selectivity of AE00272 to ESR1 were tested against >19,000 full-length human proteins on a human protein array. A protein BLAST search against H. sapiens revealed the following closely related protein: ESR2 and ERR3. These proteins were part of the array used and showed no cross-reactivity signals.

Rank	Protein	Z score	S score
1	ESR1	96.73	74.94
2	KRTAP4-4	21.79	5.02
3	KRTAP4-12	16.77	4.04
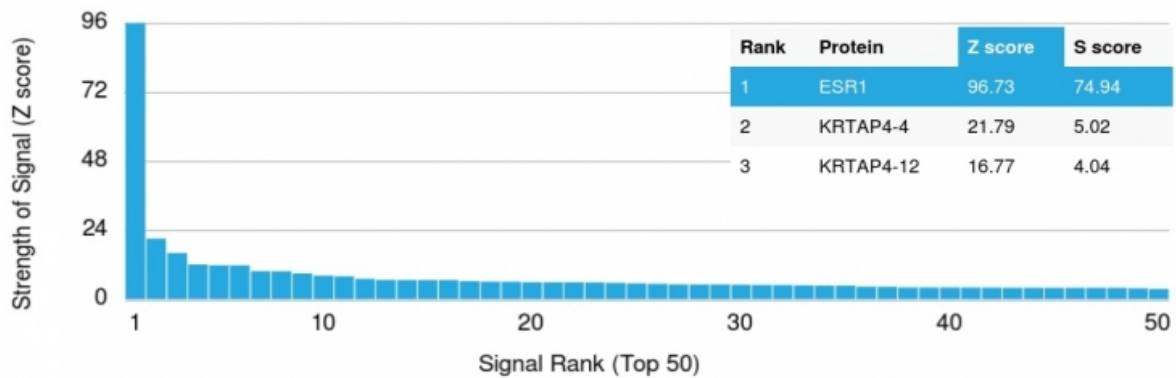
Cross-reactivity assessment of ESR1 Mouse Monoclonal Antibody AE00271 (1ug/ml) on CDI's Protein Array containing more than 19,000 full-length human proteins.

The Z-score represents the strength of a signal that an antibody (through a fluorophore-tagged secondary reagent) produces when binding to a particular protein on the array. Z-scores are in units of standard deviations (SD's) above the mean value of all signals generated on that array. When Z-scores are arranged in descending order, the difference between two successive values will be the S-score for the first. Thus, the S-score represents the relative specificity of the antibody to its intended target. An antibody is considered specific to its intended target, when it has an S-score of at least 2.5. For example, if an antibody binds to intended protein X with a Z-score of 43 and to the cross-reacting protein Y with a next Z-score of 14, then the S-score for the antibody to intended target X equals 29 (43-14).