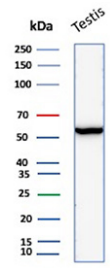
Estrogen receptor 2 Antibody / ESR2 [clone ESR2/6661] (V5880)

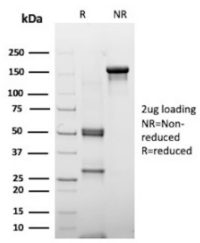
Catalog No.	Formulation	Size
V5880-100UG	0.2 mg/ml in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V5880-20UG	0.2 mg/ml in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug
V5880SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	ESR2/6661
UniProt	Q92731
Localization	Nucleus
Applications	Western Blot : 2-4ug/ml
Limitations	This Estrogen receptor 2/ESR2 antibody is available for research use only.



Estrogen receptor 2 Antibody Testis WB. Western blot analysis of human testis tissue lysate using Estrogen receptor 2/ESR2 antibody (clone ESR2/6661). Predicted molecular weight: 53-59 kDa.



SDS-PAGE Analysis of purified Estrogen receptor 2/ESR2 antibody (clone ESR2/6661). Confirmation of Purity and Integrity of Antibody.

Description

Estrogen receptor 2 Antibody targets Estrogen receptor 2, a nuclear hormone receptor encoded by the ESR2 gene and widely known as estrogen receptor beta or ER beta. Estrogen receptor 2 functions as a ligand-activated transcriptional regulator that mediates cellular responses to estrogen signaling, often in a manner distinct from Estrogen receptor 1. Through regulation of gene expression, estrogen receptor beta contributes to tissue-specific estrogen responsiveness and transcriptional balance in hormone-regulated systems.

Estrogen receptor 2 is primarily localized to the nucleus, where ER beta binds estrogen response elements and interacts with transcriptional co-regulators to modulate gene expression. In contrast to estrogen receptor alpha, estrogen receptor beta is frequently associated with modulatory or context-dependent transcriptional effects, influencing cellular differentiation, growth restraint, and signaling integration. Estrogen receptor 2 Antibody detection is therefore useful for studying nuclear receptor signaling diversity and estrogen-dependent transcriptional regulation.

Functionally, Estrogen receptor 2 regulates genes involved in reproductive biology, central nervous system function, immune modulation, and metabolic regulation. ER beta expression is prominent in tissues such as ovary, prostate, lung, brain, and immune-associated cell populations, where estrogen signaling plays nuanced regulatory roles. Estrogen receptor beta activity often counterbalances or complements ER alpha signaling, highlighting its importance in maintaining estrogen signaling equilibrium.

Altered expression or signaling of Estrogen receptor 2 has been implicated in disease-associated changes in hormone responsiveness. Dysregulation of ER beta-mediated transcriptional programs can contribute to abnormal cellular behavior, including altered proliferation, differentiation, and inflammatory responses. Studying Estrogen receptor 2 provides insight into estrogen signaling pathways that extend beyond classical estrogen receptor alpha-driven mechanisms.

Clone ESR2/6661 is designed to recognize Estrogen receptor 2 in research applications. Estrogen receptor 2 Antibody reagents are suitable for detecting nuclear ER beta expression and supporting studies focused on estrogen signaling diversity, transcriptional regulation, and hormone-responsive gene expression programs.

For comprehensive detection of Estrogen receptor beta across hormone signaling and tumor biology studies, see our Estrogen Receptor beta antibody (clone ERb455).

Application Notes

Optimal dilution of the Estrogen receptor 2/ESR2 antibody should be determined by the researcher.

Immunogen

A synthetic peptide (CGMKMETLLPEATMEQ) from the C terminus of the human estrogen receptor beta 2 isomer was used as the immunogen for the Estrogen receptor 2/ESR2 antibody.

Storage

Estrogen receptor 2/ESR2 antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.