

Recombinant Mouse Esrrb Protein, Myc/DDK-tagged

Cat. No. Esrrb-2874M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Purified recombinant protein of mouse full-length estrogen related receptor, beta (Esrrb), with C-terminal MYC/DDK tag, expressed in HEK293T cells.
Species	Mouse
Source	HEK293
Description	Transcription factor that binds a canonical ESRRB recognition (ERRE) sequence 5'TCAAGGTCA-3' localized on promoter and enhancer of targets genes regulating their expression or their transcriptional activity. Plays a role, in a LIF-independent manner, in maintenance of self-renewal and pluripotency of embryonic and trophoblast stem cells through different signaling pathways including FGF signaling pathway and Wnt signaling pathways. Upon FGF signaling pathway activation, interacts with KDM1A by directly binding to enhancer site of ELF5 and EOMES and activating their transcription leading to self-renewal of trophoblast stem cells. Also regulates expression of multiple rod-specific genes and is required for survival of this cell type. Plays a role as transcription factor activator of GATA6, NR0B1, POU5F1 and PERM1. Plays a role as transcription factor repressor of NFE2L2 transcriptional activity and ESR1 transcriptional activity. During mitosis remains bound to a subset of interphase target genes, including pluripotency regulators, through the canonical ESRRB recognition (ERRE) sequence, leading to their transcriptional activation in early G1 phase. Can coassemble on structured DNA elements with other transcription factors like SOX2, POU5F1, KDM1A and NCOA3 to trigger ESRRB-dependent gene activation. This mechanism, in the case of SOX2 corecruitment prevents the

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embryonic stem cells (ESCs) to epiblast stem cells (EpiSC) transition through positive regulation of NR0B1 that inhibits the EpiSC transcriptional program. Also plays a role inner ear development by controlling expression of ion channels and transporters and in early placentation.

Molecular Mass	49.4 kDa
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade after receiving vials.
Concentration	>50 µg/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

GENE INFORMATION

Gene Name	Esrrb estrogen related receptor, beta [Mus musculus (house mouse)]
Official Symbol	Esrrb
Synonyms	ESRRB; estrogen related receptor, beta; steroid hormone receptor ERR2; ERR-beta; estrogen receptor-like 2; estrogen receptor related 2; estrogen-related receptor beta; nuclear receptor subfamily 3 group B member 2; Err2; Errb; Nr3b2; Estrrb
Gene ID	26380
mRNA Refseq	NM_001159500

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Protein Refseq	NP_001152972
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UniProt ID	Q61539
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