

Active Recombinant Full Length Human ERG Protein, C-Flag-tagged

Cat. No. ERG-37HFL **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Recombinant Full Length Human ERG Protein, fused to Flag-tag at C-terminus, was expressed in Mammalian cells.

Species

Human

Source

Mammalian Cells

Description

This gene encodes a member of the erythroblast transformation-specific (ETS) family of transcription factors. All members of this family are key regulators of embryonic development, cell proliferation, differentiation, angiogenesis, inflammation, and apoptosis. The protein encoded by this gene is mainly expressed in the nucleus. It contains an ETS DNA-binding domain and a PNT (pointed) domain which is implicated in the self-association of chimeric oncoproteins. This protein is required for platelet adhesion to the subendothelium, inducing vascular cell remodeling. It also regulates hematopoiesis, and the differentiation and maturation of megakaryocytic cells. This gene is involved in chromosomal translocations, resulting in different fusion gene products, such as TMPSSR2-ERG and NDRG1-ERG in prostate cancer, EWS-ERG in Ewing's sarcoma and FUS-ERG in acute myeloid leukemia. More than two dozens of transcript variants generated from combinatorial usage of three alternative promoters and multiple alternative splicing events have been reported, but the full-length nature of many of these variants has not been determined.

Form

25 mM Tris HCl, pH 7.3, 100 mM glycine, 10% glycerol.

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Bio-activity

Varying amounts of human ERG expressed in HEK293 cells was incubated for one hour with wild-type or mutant biotinylated oligonucleotide (1 pmole/ul) in the presence of 25 ug/ml poly dl:dC. The reaction mixture was subsequently transferred to a microplate containing 2500 Luminex beads coupled with anti-ERG monoclonal antibody 2G8. The ERG-oligo complexes were captured onto the antibody-coated beads for two hours at room temperature with shaking. The beads were then washed, and the biotin was detected with streptavidin-phycoerythrin for 30 minutes. The beads were washed again and the fluorescent intensity was read in the Luminex instrument. The wild-type oligonucleotide carried ACCGGAAGT consensus binding sequence while the mutant oligonucleotide was identical except for a 2-base mutation in the consensus binding region, ACCCCAAGT.

ELISA capture for autoantibodies.

Molecular Mass

53.7 kDa

AA Sequence

MASTIKEALSVVSEDQSLFECAYGTPHLAKTEMTASSSSDYGQTSKMSPRVPQQD
WLSQPPARVTIKMEC NPSQVNGSRNSPDECSVAKGGKMGVSPDVTGMNYGSYM
EEKHMPPPNMTTNERRVIVPADPTLWSTDHVR QWLEWAVKEYGLPDVNILLFQNIID
GKELCKMTKDDFQRLTPSYNADILLSHLHYLRETPLPHLTSDVDK ALQNSPRLMH
ARNTGGAAFIFPNTSVYPEATQRITTRPDLPYEPPRRSAWTGHGHPTPQSKAAQPS
PSTV PKTEDQRPQLDPYQILGPTSSRLANPGSGQIQLWQFLLELLSDSSNSSCITWE
GTNGEFKMTDPDEVARR WGERKSKPNMNYDKLSRALRYYYDKNIMTKVHGKRYA
YKFDHFHIAQALQPHPPPESSLYKYPDLPYMGS
YHAHPQKMNFVAPHPALPVTSSSFFAAPNPYWNSPTGGIYPNTRLPTSHMPSHLG
TYYSGPTRRRLEQKLISEEDLAANDILDYKDDDDKV

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.

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Storage	Store at -80 centigrade.
Concentration	>50 ug/mL as determined by microplate BCA method.
Preparation	Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.
Protein Families	Druggable Genome, Transcription Factors
Full Length	Full L.

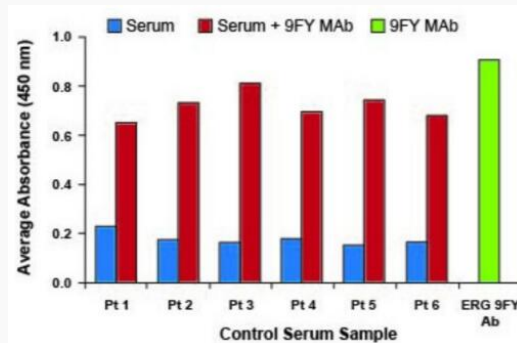
GENE INFORMATION

Gene Name	ERG ETS transcription factor ERG [Homo sapiens (human)]
Official Symbol	ERG
Synonyms	p55; erg-3
Gene ID	2078
mRNA Refseq	NM_182918.4
Protein Refseq	NP_891548.1
MIM	165080
UniProt ID	P11308

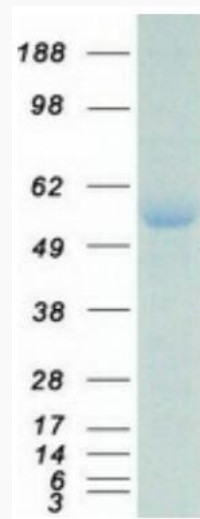
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Healthy donor control sera (designated as C1-C6), negative for ERG autoantibodies, were spiked with ten ng/ml of ERG MAb 9FY and assayed for detection sensitivity. Positive reactivities indicate that recombinant ERG protein coated on microtiter wells serves as a suitable substrate for autoantibody detection. ERG MAb 9FY tested alone as a positive control, is shown in green.



Coomassie blue staining of purified ERG protein.

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