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ProductInformation

EGR-3
Human, Recombinant
Expressed in Sf9 insect cells

Product Number **E3527**
Storage Temperature –70 °C

Synonym: Pilot

Product Description

EGR (Early Growth Response) proteins represent a family of transcription factors involved in cell cycle regulation.[1] They contain three, nearly identical DNA-binding zinc finger regions, each possessing a unique flanking region. EGR-1, -2, -3, and -4, bind the EGR-consensus sequence GCG T/GGG GCG, however the individual proteins show differing binding affinities for related sequences.[2] The EGR binding sites are present in promoters of several tissue specific genes regulating cytokines and growth factors as well as genes regulating the cell cycle.

EGR-3 has been implicated in activation of the CD95L promoter upon T cell activation.[4] EGR-3 is a potent activator of FasL expression.[5] The activation-induced expression of EGR-3 can be inhibited by cyclosporin A.[6]

Human recombinant EGR-3 is expressed in Sf9 insect cells infected with recombinant baculovirus containing a cDNA insert for human EGR-3. Human EGR-3, based on its cDNA sequence, is a 387 amino acid protein with a calculated molecular weight of 42.6 kDa.[3]

Human recombinant EGR-3 is suitable for use in EMSA (electrophoretic mobility shift assay), *in-vitro* transcription assays, and nuclear extract analysis.

Reagents

Human recombinant EGR-3 is supplied as a frozen liquid containing at least 25 BFU (band-forming units) ERG-3 in 75 µL cell lysate supernatant containing 20 mM HEPES, pH 7.9, 420 mM NaCl, 1.5 mM $MgCl_2$, 0.2 mM EDTA, and 25% glycerol.

Preparation Instructions

Dilution of the stock solution is not necessary. The thawed solution is sufficient for performing 25 gel shift assays under standard conditions.

Precautions and Disclaimer

EGR-1 is for laboratory use only. Not for drug household or other uses.

Storage/Stability

Store in working aliquots at –70 °C. Repeated freeze-thaw cycles should be avoided. Do not store in a frost-free freezer.

Product Profile

Activity is >0.33 BFU/µL. EGR-3 activity is measured by its ability to induce band shift of an oligonucleotide containing the sequence GCG GGG GCG labeled with ^{33}P-γ-ATP. One BFU is sufficient to detect a band shift under standard conditions on native gel electrophoresis.

References

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3. Mages, H.W., et al., Expression of PILOT, a putative transcription factor, requires two signals and is cyclosporin A sensitive in T cells. Int. Immunol., **5**, 63-70 (1993).
4. Li-Weber, M., et al., Novel Egr/NF-AT composite sites mediate activation of the CD95 (APO-1/Fas) ligand promoter in response to T cell stimulation. Eur. J. Immunol., **29**, 3017-3027 (1999)
5. Rengarajan, J., et al., Sequential involvement of NFAT and Egr transcription factors in FasL regulation. Immunity, **12**, 293-300 (2000)
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