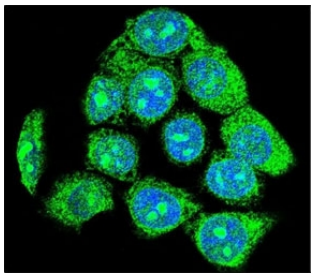
EGR1 Antibody / Early Growth Response 1 (F48309)

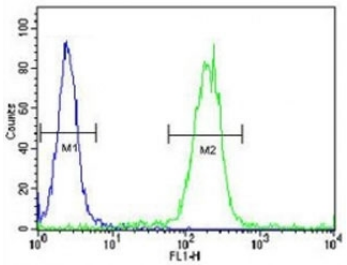
Catalog No.	Formulation	Size
F48309-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F48309-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse
Predicted Reactivity	Bovine, Xenopus
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Purified
UniProt	P18146
Applications	Western Blot : 1:1000 Flow Cytometry : 1:10-1:50 Immunofluorescence : 1:10-1:50
Limitations	This EGR1 antibody is available for research use only.

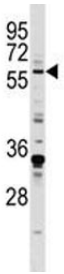


Confocal immunofluorescent analysis of EGR1 antibody with HeLa cells followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green). DAPI was used as a nuclear counterstain (blue).



EGR1 antibody flow cytometric analysis of WiDr cells (right histogram) compared to a negative control (left histogram). FITC-conjugated goat-anti-rabbit secondary Ab was used for the analysis.

Western blot analysis of EGR1 antibody and mouse NIH3T3 lysate. Predicted molecular weight ~58 kDa.



EGR1 antibody western blot analysis in MDA-MB231 lysate. Predicted molecular weight ~58 kDa.

Description

EGR1 antibody recognizes Early Growth Response 1, an immediate early transcription factor rapidly induced by a wide range of extracellular stimuli including growth factors, cytokines, stress signals, and neuronal activity. EGR1 encodes a zinc finger DNA binding protein that belongs to the early growth response family of transcriptional regulators and functions as a key mediator linking transient signaling events to longer-term changes in gene expression.

Early Growth Response 1 is characterized by three Cys2-His2 type zinc finger domains that enable sequence-specific binding to GC-rich regulatory elements in target gene promoters. Through this DNA binding activity, EGR1 regulates transcription of genes involved in cell proliferation, differentiation, apoptosis, and adaptive cellular responses. Because of its rapid and transient induction, EGR1 is widely used as a marker of cellular activation and signal-dependent transcriptional responses across many biological systems.

EGR1 is also widely known in the literature under alternative names such as Zif268, NGFI-A, and Krox-24, particularly in neuroscience and developmental biology research. In neurons, Zif268 expression is strongly induced by synaptic activity and sensory stimulation, and it has been extensively studied as a molecular marker of neuronal activation, synaptic plasticity, and learning-associated transcriptional programs. This activity-dependent regulation has made EGR1 a commonly examined transcription factor in studies of memory formation and neural circuit remodeling.

Beyond the nervous system, Early Growth Response 1 plays important roles in vascular biology, immune responses, and cancer-related signaling pathways. EGR1 can function as either a transcriptional activator or repressor depending on cellular context, interacting with co-regulators and chromatin-modifying enzymes to fine tune gene expression outcomes. Altered EGR1 expression has been associated with tumor progression, inflammation, and stress response pathways, underscoring its broad relevance in both normal physiology and disease-related research.

EGR1 Antibody / Early Growth Response 1 is designed to detect EGR1 in research applications, enabling evaluation of its expression patterns and subcellular localization following cellular stimulation or stress. As a transcription factor, EGR1

is primarily localized to the nucleus, consistent with its role in transcriptional regulation, although expression levels are often tightly regulated and transient. Overall, Early Growth Response 1 remains a central model protein for studying stimulus-induced gene regulation and immediate early transcriptional responses across diverse experimental systems.

Application Notes

Titration of the EGR1 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 9-37 from the human protein was used as the immunogen for this EGR1 antibody.

Storage

Aliquot the EGR1 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.