

IRF-3

Interferon Regulatory Factor-3 human human, recombinant, *E. coli*

Cat. No.	Amount
PR-451	50 µg

For *in vitro* use only
Quality guaranteed for 12 months
Store at -20°C

Avoid freeze / thaw cycles

Form

Liquid. Supplied in PBS pH 7.4.
For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Molecular Weight

13 kDa

Purity

≥ 95% by SDS-PAGE and RP-HPLC

Description

Members of the Interferon regulatory factor (IRF) family regulate gene expression critical to immune response, hemopoiesis, and proliferation. IRF-3 is a member of the IRF family, and is distinct from other family members. Its transcriptional activity is regulated solely by posttranslational modifications. It plays a crucial role in activation of innate immunity and inflammation in response to viral infection. IRF-3 mediates interferon-stimulated response element (isre) promoter activation. Functions as a molecular switch for antiviral activity. Dsrna generated during the course of a viral infection leads to IRF3 phosphorylation on the c-terminal serine/threonine cluster. This induces a conformational change, leading to its dimerization, nuclear localization and association with creb binding protein (crebbp) to form dsrna-activated factor 1 (drafi1), a complex which activates the transcription of genes under the control of isre. The complex binds to the ie and prdiii regions on the ifn-alpha and ifn-beta promoters respectively. IRF-3 does not have any transcription activation domains.

IRF-3 Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 111 amino acids (1-112) and having a molecular mass of 13 kDa.

The Interferon Regulatory Factor-3 is purified by proprietary chromatographic techniques.

Selected References:

- Hiscott (2007) Triggering the innate antiviral response through IRF-3 activation. *J. Biol. Chem.* **282**:15325.
Hiscott *et al.* (2005) IRF-3 releases its inhibitions. *Structure* **13**:1269.
Preston *et al.* (2001) Activation of interferon response factor-3 in human cells infected with herpes simplex virus type 1 or human cytomegalovirus. *J. Virol.* **75**:8909.