

Properties

Storage instructions Store at -80°C. Please refer to protocols.

Components	1 kit
ab255454 - Human IRF3 knockout HeLa cell lysate (Lyophilized)	1 x 100µg
ab255929 - Human Wild Type HeLa cell lysate (Lyophilized)	1 x 100µg

Cell type epithelial
Disease Adenocarcinoma
Gender Female
STR Analysis Amelogenin X D5S818: 11, 12 D13S317: 12, 13.3 D7S820: 8, 12 D16S539: 9, 10 WWA: 16, 18 TH01: 7 TPOX: 8,12 CSF1PO: 9, 10

Target

Function 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 (DRAF1), 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.

Tissue specificity Expressed constitutively in a variety of tissues.

Sequence similarities Belongs to the IRF family.
Contains 1 IRF tryptophan pentad repeat DNA-binding domain.

Post-translational modifications Constitutively phosphorylated on many serines residues. C-terminal serine/threonine cluster is phosphorylated in response of induction by IKBKE and TBK1. Ser-385 and Ser-386 may be specifically phosphorylated in response to induction. An alternate model propose that the five serine/threonine residues between 396 and 405 are phosphorylated in response to a viral infection. Phosphorylation, and subsequent activation of IRF3 is inhibited by vaccinia virus protein E3.
Ubiquitinated; ubiquitination involves RBCK1 leading to proteasomal degradation.
Polyubiquitinated; ubiquitination involves TRIM21 leading to proteasomal degradation.
ISGylated by HERC5 resulting in sustained IRF3 activation and in the inhibition of IRF3 ubiquitination by disrupting PIN1 binding. The phosphorylation state of IRF3 does not alter ISGylation.

Cellular localization Cytoplasm. Nucleus. Shuttles between cytoplasmic and nuclear compartments, with export being the prevailing effect. When activated, IRF3 interaction with CREBBP prevents its export to the cytoplasm.

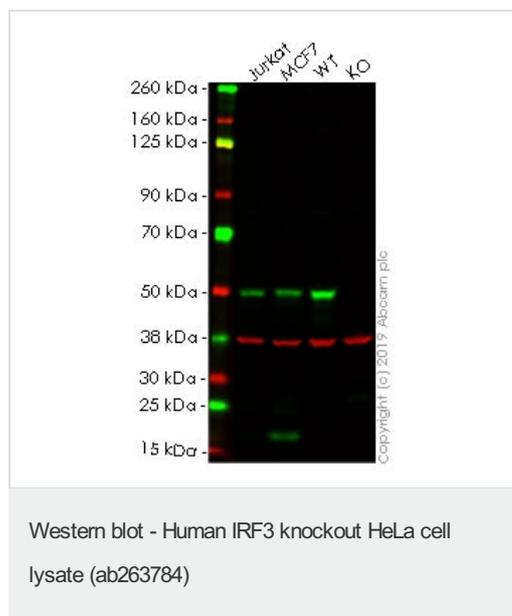
Applications

Our [Abpromise guarantee](#) covers the use of **ab263784** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use at an assay dependent concentration.

Images



Lane 1: Jurkat cell lysate (20 µg)

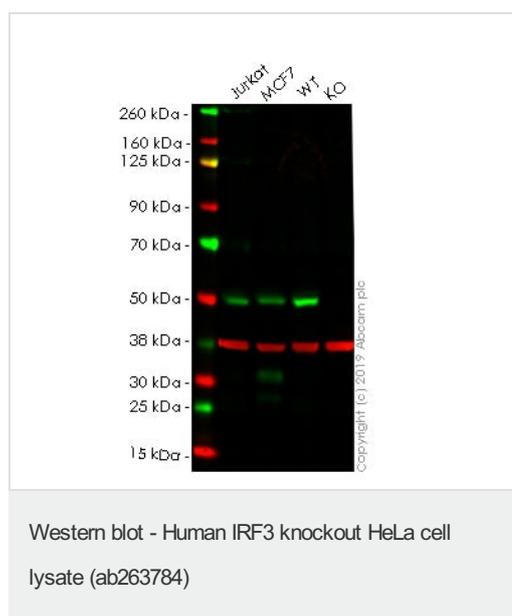
Lane 2: MCF7 cell lysate (20 µg)

Lane 3: Wild-type HeLa cell lysate (20 µg)

Lane 4: IRF3 knockout HeLa cell lysate (20 µg)

Lanes 1 - 4: Merged signal (red and green). Green - [ab68481](#) observed at 50 kDa. Red - loading control, [ab8245](#) observed at 37 kDa.

[ab68481](#) was shown to react with IRF3 in wild-type HeLa cells. Loss of signal was observed when knockout cell line [ab255345](#) (knockout cell lysate [ab263784](#)) was used. Wild-type and IRF3 knockout samples were subjected to SDS-PAGE. [ab68481](#) and Anti-GAPDH antibody [6C5] - Loading Control ([ab8245](#)) were incubated overnight at 4°C at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed ([ab216776](#)) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Lane 1: Jurkat cell lysate (20 µg)

Lane 2: MCF7 cell lysate (20 µg)

Lane 3: Wild-type HeLa cell lysate (20 µg)

Lane 4: IRF3 knockout HeLa cell lysate (20 µg)

Lanes 1 - 4: Merged signal (red and green). Green - [ab76409](#) observed at 50 kDa. Red - loading control, [ab8245](#) observed at 37 kDa.

[ab76409](#) was shown to react with IRF3 in wild-type HeLa. Loss of signal was observed when knockout cell line [ab255345](#) (knockout cell lysate [ab263784](#)) was used. Wild-type and IRF3 knockout samples were subjected to SDS-PAGE. [ab76409](#) and Anti-GAPDH antibody [6C5] - Loading Control ([ab8245](#)) were incubated overnight at 4°C at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L

(IRDye® 800CW) preadsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed ([ab216776](#)) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

Allele-1: 1 bp deletion in exon5

Mut	AGCCCTGAGCCCTGCCCTCAGCCCTGCG-AGCCCCAGCTTGGACAATCCCACCTCCCTT
WT	AGCCCTGAGCCCTGCCCTCAGCCCTGCGGAGCCCCAGCTTGGACAATCCCACCTCCCTT

Sanger Sequencing - Human IRF3 knockout HeLa cell lysate ([ab263784](#))

Allele-1: 1 bp deletion in exon5

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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