




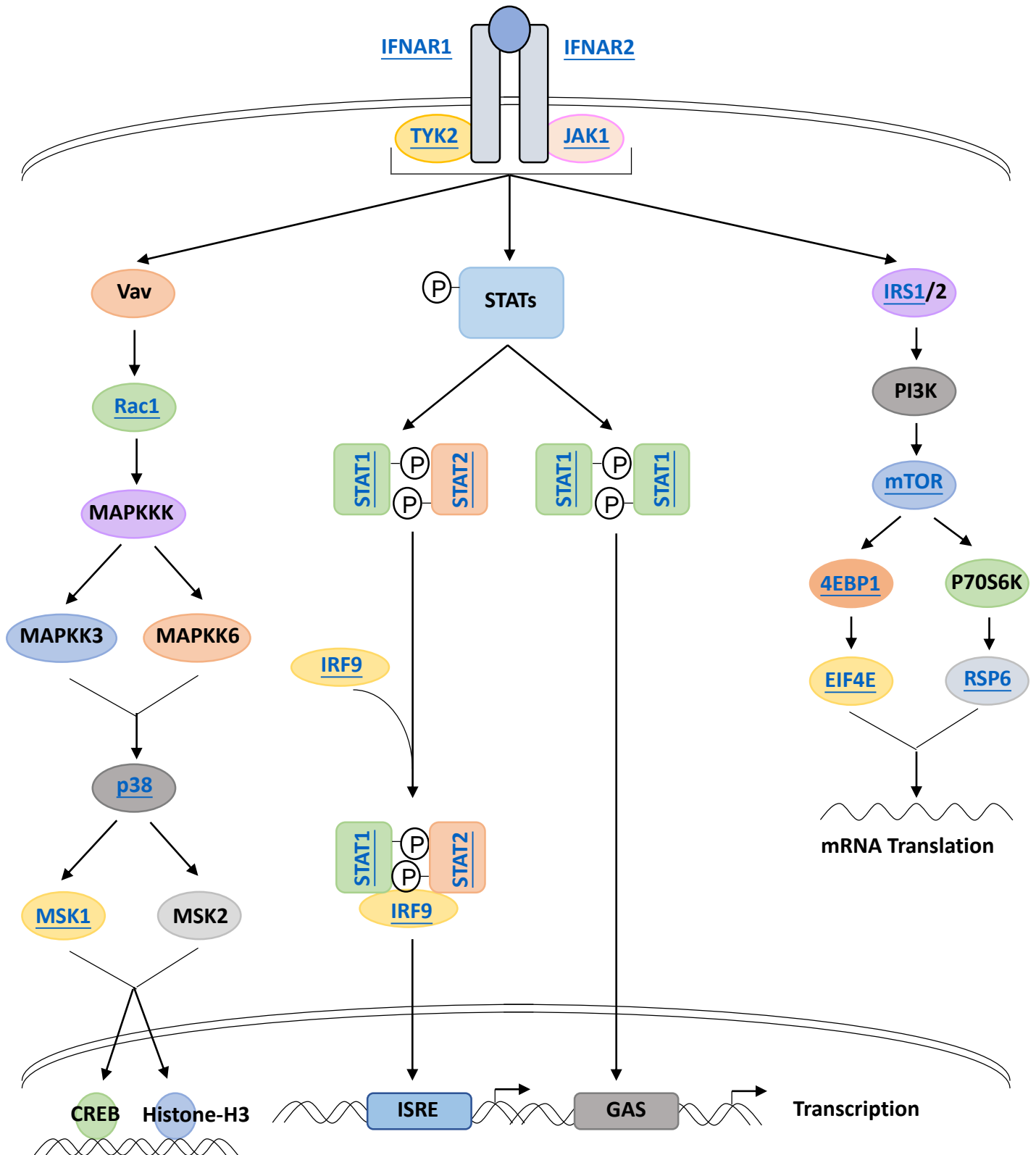
# Featured Type I Interferon Signal Pathway Related Protein Products

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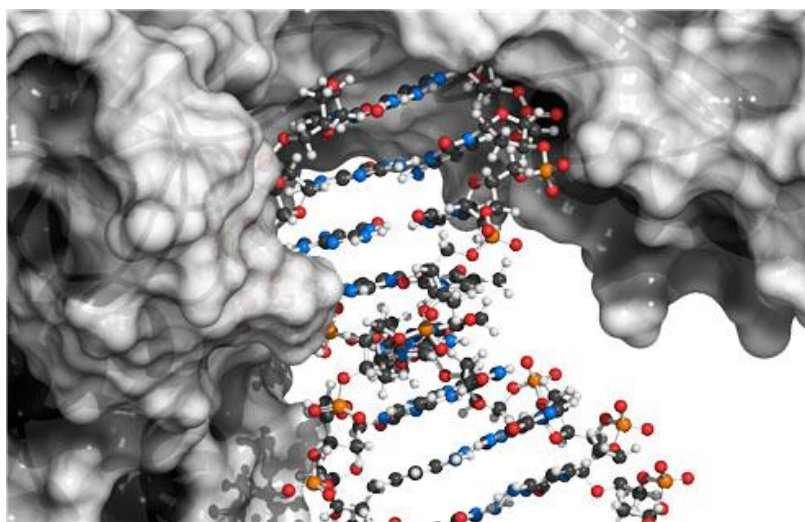
Type I IFNs



## Type I Interferon Signaling Pathway

Following viral infection, the human body triggers a complex regulatory system of innate and adaptive immune responses designed to defend against the virus. One of the many responses to the viral invasion is the induction of the pleiotropic cytokines, interferon (IFN). Interferons belong to cytokine proteins. An infected cell will release interferons to protect host cells from several pathogens, such as viruses, parasites and bacteria. Interferons have the specific ability to interfere with viral replication, also activate immune cells (such as macrophages and natural killer cells) and increase host defenses. Interferons are used in the treatment of hepatitis B and C, herpes simplex, many types of cancer and multiple sclerosis. There are more than twenty interferons have been identified which divided among three classes: Type I IFN, Type II IFN, and Type III IFN. In this article, we mainly discuss the type I interferon triggered signal pathway. IFN- $\alpha$  and IFN- $\beta$  are two typical type I interferons found in most animals, including humans. They are mainly involved in innate immune response against viral infection.

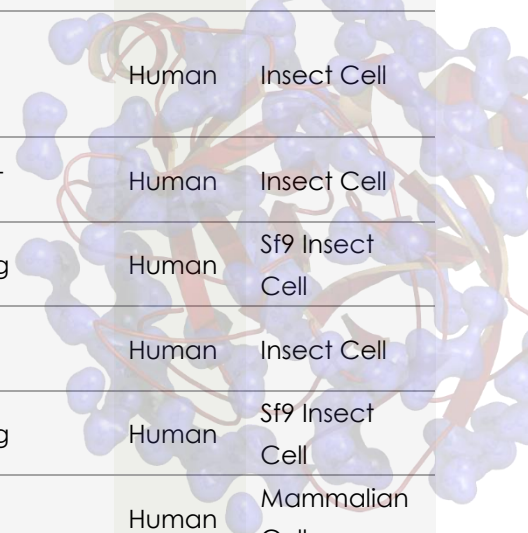
Type I interferons are induced following recognition of pathogen components during infection by various host pattern recognition receptors. Immune cells are able to synthesize IFN- $\alpha$ , IFN- $\beta$  and other cytokines. There are four main pathways leading to the production of type I interferons. The RLRs pathway is activated by RNA viruses. The cGAS-STING pathway is activated by DNA viruses. The third pathway involves the adaptor protein TRIF which is recruited by TLR3 and TLR4. The last pathway is triggered by TLR7 or TLR8 and TLR9 leading to the activation of the transcription factor IRF7. Following their production, type I interferons triggered antiviral responses by binding to a common receptor.



## Featured Protein Products Related to Type I Interferon Signaling Pathway

| Group         | Cat.No.       | Product Name  | Tag     | Species | Source          |
|---------------|---------------|---|---------|---------|-----------------|
| <b>IFNAR1</b> | IFNAR1-001H   | Recombinant Human IFNAR1 Protein                          |         | Human   | NS0             |
|               | IFNAR1-508H   | Recombinant Human IFNAR1 Protein, Fc-tagged               | Fc      | Human   | HEK293          |
|               | IFNAR1-509H   | Recombinant Human IFNAR1 Protein, His-tagged              | His     | Human   | HEK293          |
| <b>IFNAR2</b> | IFNAR2-1152H  | Recombinant Human IFNAR2 protein, His & T7-tagged         | His/T7  | Human   | E.coli          |
|               | IFNAR2-14078H | Recombinant Human IFNAR2, GST-tagged                      | GST     | Human   | E.coli          |
|               | IFNAR2-156H   | Recombinant Human IFNAR2, His-tagged                      | His     | Human   | HEK293          |
|               | IFNAR2-157H   | Recombinant Human IFNAR2, Fc-tagged                       | Fc      | Human   | HEK293          |
| <b>JAK1</b>   | JAK1-1941H    | Recombinant Human JAK1 Protein (850-1154 aa), His-tagged  | His     | Human   | Yeast           |
|               | JAK1-18H      | Recombinant Human JAK1 protein, GST-tagged                | GST     | Human   | Insect Cell     |
|               | JAK1-28H      | Recombinant Human JAK1 protein, MYC/DDK-tagged            | MYC/DDK | Human   | HEK293          |
|               | JAK1-56H      | Recombinant Human JAK1 protein, Flag-tagged, Biotinylated | Flag    | Human   | Insect Cell     |
| <b>TYK2</b>   | TYK2-1505H    | Recombinant Human TYK2 (Active), GST-tagged               | GST     | Human   | Sf9 Insect Cell |
|               | TYK2-702H     | Recombinant Human TYK2, His-tagged                        | His     | Human   | Sf9 Insect Cell |
|               | TYK2-89H      | Recombinant Human TYK2 protein, Flag-tagged, Biotinylated | Flag    | Human   | Insect Cell     |
| <b>STAT1</b>  | STAT1-2783H   | Recombinant Human STAT1, His-tagged                       | His     | Human   | E.coli          |
|               | STAT1-2901H   | Recombinant Human STAT1 Protein, MYC/DDK-tagged           | MYC/DDK | Human   | HEK293          |
|               | STAT1-2996H   | Recombinant Human STAT1, GST-tagged                       | GST     | Human   | E.coli          |
| <b>STAT2</b>  | STAT2-2515H   | Recombinant Human STAT2, His-tagged                       | His     | Human   | Insect Cell     |
|               | STAT2-2997H   | Recombinant Human STAT2, GST-tagged                       | GST     | Human   | E.coli          |
|               | STAT2-334H    | Recombinant Human STAT2 protein, His/MBP-tagged           | His/MBP | Human   | E.coli          |
| <b>RAC1</b>   | RAC1-191H     | Recombinant Human RAC1(Q61L), His-tagged                  | His     | Human   | E.coli          |

| Group          | Cat.No.            | Product Name  | Tag     | Species | Source          |
|----------------|--------------------|---|---------|---------|-----------------|
| <b>RAC1</b>    | RAC1-192H          | Recombinant Human RAC1, GST-tagged  | GST     | Human   | E.coli          |
|                | RAC1-194H          | Recombinant Human RAC1 protein, His-tagged  | His     | Human   | E.coli          |
|                | RAC1-445H          | Recombinant Human RAC1 Protein, MYC/DDK-tagged  | MYC/DDK | Human   | HEK293          |
| <b>IRS1</b>    | IRS1-12HCL         | Recombinant Human IRS1 HEK293T cell lysate  | MYC/DDK | Human   | HEK293T         |
|                | IRS1-1466H         | Recombinant Human Insulin Receptor Substrate 1, GST-tagged                            | GST     | Human   | Sf9 Insect Cell |
|                | IRS1-28643TH       | Recombinant Human IRS1  |         | Human   | E.coli          |
| <b>PIK3CA</b>  | PIK3CA&PIK3R1-150H | Recombinant Human PIK3CA(E545K)/PIK3R1 protein, His-tagged, Active                    | His     | Human   | Insect Cell     |
|                | PIK3CA&PIK3R1-153H | Recombinant Human PIK3CA/PIK3R1 protein, GST-tagged, Active                           | GST     | Human   | Insect Cell     |
|                | PIK3CA/PIK3R1-631H | Recombinant Human PIK3CA/PIK3R1, FLAG-tagged  | Flag    | Human   | Sf9 Insect Cell |
| <b>PIK3CB</b>  | PIK3CB&PIK3R2-156H | Recombinant Human PIK3CB/PIK3R2 protein, His-tagged, Active                           | His     | Human   | Insect Cell     |
|                | PIK3CB/PIK3R1-632H | Recombinant Human PIK3CB/PIK3R1, FLAG-tagged  | Flag    | Human   | Sf9 Insect Cell |
|                | PIK3CB-620H        | Recombinant Human PIK3CB  | His     | Human   | Mammalian Cell  |
| <b>PIK3CD</b>  | PIK3CD-1727H       | Recombinant Human PIK3CD protein, His & T7-tagged                                     | His/T7  | Human   | E.coli          |
|                | PIK3CD-1896H       | Recombinant Human Phosphoinositide-3-Kinase, Catalytic, Delta Polypeptide, His-tagged | His     | Human   | Sf9 Insect Cell |
|                | PIK3CD-52H         | Recombinant Human PIK3CD, GST-tagged  | GST     | Human   | Sf9 Insect Cell |
| <b>PIK3CG</b>  | PIK3CG-158H        | Recombinant Human PIK3CG protein, His-tagged, Active                                  | His     | Human   | Insect Cell     |
|                | PIK3CG-55H         | Recombinant Human PIK3CG, GST-tagged  | GST     | Human   | Sf9 Insect Cell |
| <b>IRF9</b>    | IRF9-5016H         | Recombinant Human IRF9 Protein, GST-tagged  | GST     | Human   | Wheat Germ      |
| <b>AIMP2</b>   | AIMP2-2030H        | Recombinant Human AIMP2 Protein (1-320 aa), His-tagged                                | His     | Human   | E.coli          |
| <b>RPS6KA5</b> | RPS6KA5-2435H      | Recombinant Human RPS6KA5, His-tagged   | His     | Human   | E.coli          |



| Group           | Cat.No.         | Product Name  | Tag      | Species | Source          |
|-----------------|-----------------|---|----------|---------|-----------------|
| <b>RPS6KA5</b>  | RPS6KA5-30250TH | Recombinant Human RPS6KA5                                   |          | Human   |                 |
|                 | RPS6KA5-359H    | Recombinant Human RPS6KA5, GST-tagged, Active               | GST      | Human   | Sf9 Insect Cell |
| <b>MTOR</b>     | MTOR-156H       | Recombinant Human MTOR, MYC/DDK-tagged                      | MYC/DDK  | Human   | HEK293          |
|                 | MTOR-1820H      | Recombinant Human MTOR protein, His & T7-tagged             | His/T7   | Human   | E.coli          |
|                 | MTOR-42H        | Recombinant Human MTOR/RPTOR/MLST8 protein, FLAG/His-tagged | FLAG/His | Human   | Insect Cell     |
|                 | MTOR-523H       | Recombinant Human MTOR                                      | His      | Human   | Mammalian Cell  |
|                 | MTOR-5728H      | Recombinant Human MTOR Protein, GST-tagged                  | GST      | Human   | Wheat Germ      |
| <b>EIF4EBP1</b> | EIF4EBP1-154H   | Recombinant Human EIF4EBP1 protein, His-tagged              | His      | Human   | E.coli          |
|                 | EIF4EBP1-3203H  | Recombinant Human EIF4EBP1 Protein, GST-tagged              | GST      | Human   | Wheat Germ      |
| <b>EIF4E</b>    | EIF4E-2050H     | Recombinant Human EIF4E protein                             |          | Human   | E.coli          |
|                 | EIF4E-26389TH   | Recombinant Human EIF4E protein, His-tagged                 | His      | Human   | E.coli          |
|                 | EIF4E-3198H     | Recombinant Human EIF4E Protein, GST-tagged                 | GST      | Human   | Wheat Germ      |
| <b>RPS6KB1</b>  | RPS6KB1-13H     | Recombinant Human RPS6KB1 Protein, His-tagged               | His      | Human   | E.coli          |
|                 | RPS6KB1-195H    | Recombinant Human RPS6KB1, GST-tagged                       | GST      | Human   | Sf9 Insect Cell |
| <b>RPS6KB2</b>  | RPS6KB2-2437H   | Recombinant Human RPS6KB2, His-tagged                       | His      | Human   | E.coli          |
|                 | RPS6KB2-360H    | Recombinant Human RPS6KB2 protein, His/MBP-tagged           | His/MBP  | Human   | E.coli          |
|                 | RPS6KB2-377H    | Recombinant Human RPS6KB2, GST-tagged, Active               | GST      | Human   | Sf9 Insect Cell |
| <b>RPS6</b>     | RPS6-30769TH    | Recombinant Human RPS6                                      |          | Human   | E.coli          |
|                 | RPS6-307H       | Recombinant Human RPS6, GST-tagged                          | GST      | Human   | Wheat Germ      |

