

## Product Information

### Anti-IRAK

produced in rabbit, IgG fraction of antiserum

Catalog Number **I8028**

### Product Description

Anti-IRAK is produced in rabbit using a synthetic peptide corresponding to amino acids 700-712 of human IL-1 receptor-associated kinase (IRAK)<sup>1</sup> as immunogen.

Anti-IRAK recognizes human IRAK by immunoprecipitation as well as immunoblotting (80 kDa in non-activated cells).

IRAK (IL-1 receptor associated kinase) is a serine/threonine protein kinase that mediates a signaling cascade leading to NF- $\kappa$ B activation by members in IL-1 family including IL-1 and a novel cytokine IL-18.<sup>1,2</sup>

IRAK is recruited to the IL-1 receptor complex and becomes phosphorylated soon after cells are exposed to the cytokine. IRAK then interacts with TRAF6 (TNF receptor-associated factor 6) which is required for NF- $\kappa$ B activation by IL-1.<sup>3</sup> NF- $\kappa$ B is a ubiquitous transcription factor and mediator of gene expression during activation of immune and inflammatory responses. In addition to mediating the expression of genes in response to IL-1, it also mediates the response to TNF $\alpha$  (tumor necrosis factor  $\alpha$ ) and LPS (lipopolysaccharide).

### Reagents

Supplied at 0.5 mg/ml in phosphate buffered saline, containing 0.02% sodium azide

### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

### Storage/Stability

Antibody can be stored at 2-8 °C for three months and at -20 °C for one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

### Product Profile

**Immunoblotting:** the recommended working concentration is 0.25  $\mu$ g/ml using total HeLa cell or THP-1 cell lysates. A band of 80 kDa is detected in non-activated cells.

**Immunoprecipitation:** use 2-4  $\mu$ g per sample.

### References

1. Cao, Z. et al., IRAK: a kinase associated with the interleukin-1 receptor. *Science*, **271**, 1128-1131 (1996).
2. Robinson, D., et al., IGIF does not drive Th1 development but synergizes with IL-12 for interferon-gamma production and activates IRAK and NF- $\kappa$ B. *Immunity*, **7**, 571-581 (1997).
3. Cao, Z., et al., TRAF6 is a signal transducer for interleukin-1. *Nature*, **383**, 443-446 (1996).

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