

# ZYMED® Laboratories

invitrogen immunodetection

Qty: 100µg/400 µL

Rabbit anti-IRAK2

Catalog No. 38-4800

Lot No.

## Rabbit anti-IRAK2

### FORM

This polyclonal antibody is supplied as a 400 µL aliquot at a concentration of 0.25 mg/mL in phosphate buffered saline (pH 7.4) containing 0.1% sodium azide. This antibody is epitope-affinity purified from rabbit antiserum.

PAD: ZMD.381

### IMMUNOGEN

Synthetic peptide derived from an internal region of the human IRAK2 (interleukin-1 receptor-associated kinase 2) protein.

### SPECIFICITY

This antibody reacts with the human IRAK2 protein. On Western blots, it identifies the target band at ~65 kDa. Another band at ~130 kDa may represent a dimer. In K562 cell lysates, a band at ~80 kDa has also been observed.

### REACTIVITY

Reactivity has been confirmed with human K562, HeLa, HepG2, PC-3, HEK293 and BC-1 cell lysates.

Sample	Western Blotting	Immuno-Precipitation (native)
Human	+++	0*

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

\*No reactivity observed under conditions tested.

### USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

**Western Blotting:** 1-3 µg/mL

### STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

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**BACKGROUND**

Interleukin-1 receptor-associated kinases (IRAKs) are upstream activators of NF $\kappa$ B in the inflammatory response mediated by IL-1R and Toll-like receptors (TLRs) after exposure to IL-1 or bacterial lipopolysaccharide(LPS). The first human IRAK to be cloned was IRAK1<sup>1</sup>, followed by IRAK2<sup>2</sup>, IRAK-M<sup>3</sup> and IRAK4<sup>4</sup>. The IRAKs share sequence homology to the *Drosophila* protein kinase pelle.<sup>1</sup> Each contains a death domain (DD), which is used for protein-protein interactions with the DDs of other molecules, and putative kinase domains.<sup>5</sup>

IRAK2 is catalytically inactive due to the absence of key residues in its putative kinase domain.<sup>2,3</sup> It is known to associate with the adaptor protein MyD88 in the IL-1R/IRAK/TRAF6/ NF $\kappa$ B signaling pathway<sup>6</sup>, as well as with Akt (protein kinase B)<sup>7</sup> and with Ras in the Ras/IL-1L/p38 MAP kinase signal transduction cascade<sup>8</sup>. IRAK2 and MyD88 are required for IL-1R-induced NF $\kappa$ B activation; therefore both may represent therapeutic targets for inhibiting IL-1-induced inflammation.<sup>2</sup>

**REFERENCES**

1. Cao Z, et al. *Science* 271:1128-1131, 1996.
2. Muzio M, et al. *Science* 278:1612-1615, 1997.
3. Wesche H, et al. *J Biol Chem* 274:19403-19410, 1999.
4. Li S, et al. *PNAS* 99:5567-5572, 2002.
5. Li X, et al. *Mol Cell Biol* 19:4643-4652, 1999.
6. Zhang FX, et al. *J Biol Chem* 274:7611-7614, 1999.
7. Cenni V, et al. *Biochem J* 376:303-311, 2003.
8. McDermott EP & O'Neill JAJ. *J Biol Chem* 277(10):7808-7815, 2002.

**RELATED PRODUCTS**

<b>Product</b>	<b>Conjugate</b>	<b>Cat. No.</b>
Protein A	Sepharose <sup>®</sup> 4B	10-1041
rec-Protein G	Sepharose <sup>®</sup> 4B	10-1241

<b>Conjugate</b>	<b>ZyMAX<sup>™</sup> Goat x Rabbit IgG (H+L)</b>	<b>ZyMAX<sup>™</sup> Goat x Mouse IgG (H+L)</b>
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy <sup>™</sup> 3	81-6115	81-6515
Cy <sup>™</sup> 5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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