

IRAK Isoform Antibody Sampler Kit

Cat# AK0179

Upon receipt, store at -20°C. Avoid freeze/thaw cycles.

PRODUCT DESCRIPTION

Interleukin-1 (IL-1) receptor-associated kinase (IRAK) is a serine/threonine-specific kinase that can be coprecipitated in an IL-1-inducible manner with the IL-1 receptor. The mammalian family of IRAK molecules contains four members (IRAK1, IRAK2, IRAK3/IRAK-M, and IRAK4). The binding of IL-1 to IL-1 receptor type I (IL-1RI) initiates the formation of a complex that includes IL-1RI, AcP, MyD88, and IRAKs. IRAK undergoes autophosphorylation shortly after IL-1 stimulation. The subsequent events involve IRAK dissociation from the IL-1RI complex, its ubiquitination, and its association with two membrane-bound proteins: TAB2 and TRAF6. The resulting IRAK-TRAF6-TAB2 complex is then released into the cytoplasm where it activates protein kinase cascades, including TAK1, IKKs, and the stress-activated kinases. Upon IL-1R/TLR (Toll-Like Receptor) ligation, IRAK1 and IRAK4 are rapidly recruited to the receptor by the adaptor MyD88. IRAK1 is phosphorylated by IRAK4 at Thr209 and Thr387, followed by sequential autohyperphosphorylation in various domains. Unlike IRAK1 and IRAK4, IRAK2 and IRAK-M do not have significant kinase activity although they can still activate NF- κ B when overexpressed. Antisense oligonucleotide depletion of IRAK2 can inhibit IL-1 mediated NF- κ B activation. Expression of IRAK-M is more restricted compared to other family members with highest levels of expression occurring in monocytes/macrophages. Studies from IRAK-M knockout mice suggest that it may play a role as a negative regulator of TLR signaling and innate immune responses by preventing the dissociation of IRAK1 and IRAK4 from MyD88 and the subsequent formation of its complex with TRAF6.

PRODUCT INCLUDES

Cat No.	Product name	Quantity	Applications	Reactivity	Host
A340567	IRAK1 Polyclonal Antibody	20 μ L	WB, IF, ELISA	Human, Mouse, Rat	Rabbit
A340568	IRAK2 Polyclonal Antibody	20 μ L	WB, ELISA	Human	Rabbit
A340569	IRAK3 Polyclonal Antibody	20 μ L	WB, IHC, IF, ELISA	Human	Rabbit
A1013s	Goat Anti-Rabbit IgG (H+L) (peroxidase/HRP conjugated)	120 μ L	WB, ELISA	Rabbit	Goat

PRODUCT USE LIMITATION

These products are intended for research use only.