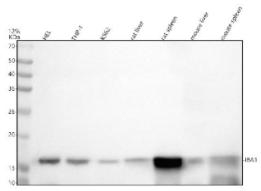
AIF1 Antibody / IBA1 [clone 31A74] (FY12026)

Catalog No.	Formulation	Size
FY12026	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Human, Mouse, Rat
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	31A74
Purity	Affinity-chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	P55008, O70200
Applications	Western Blot : 1:500-1:2000 Immunohistochemistry : 1:50-1:200 Immunocytochemistry/Immunofluorescence : 1:50-1:200
Limitations	This AIF1 antibody is available for research use only.



Western blot analysis of AIF1 using anti-AIF1 antibody recombinant rabbit mAb clone 31A74. Electrophoresis was performed on a 12% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human HEL whole cell lysates, Lane 2: human THP-1 whole cell lysates, Lane 3: human K562 whole cell lysates, Lane 4: rat liver tissue lysates, Lane 5: rat spleen tissue lysates, Lane 6: mouse liver tissue lysates, Lane 7: mouse spleen tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-AIF1 antibody at 1: 500 overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using an ECL Plus Western Blotting Substrate. A specific band was detected for AIF1 at approximately 17 kDa. The expected band size for IBA1/AIF1 is at 17 kDa.

Description

AIF1 Antibody Recombinant Rabbit mAb clone 31A74 recognizes Allograft inflammatory factor 1, a cytoplasmic calcium-binding protein encoded by the AIF1 gene on chromosome 6p21.3. Allograft inflammatory factor 1, commonly referred to as IBA1 in the literature, is a 17 kDa protein predominantly expressed in microglia and macrophages, where it plays a key role in immune activation and cytoskeletal remodeling. AIF1 antibody, also known as IBA1 antibody, is widely used in studies of neuroinflammation, microglial activation, and macrophage biology. This recombinant rabbit monoclonal antibody supports specific detection of AIF1 expression in central nervous system and peripheral immune tissues.

AIF1 belongs to the EF-hand calcium-binding protein family and contains two EF-hand motifs that mediate calcium-dependent conformational changes. Through interaction with actin and other cytoskeletal components, IBA1 regulates membrane ruffling, phagocytosis, and cell motility in activated microglia. It is upregulated in response to inflammatory stimuli and is commonly used as a marker of activated microglia in models of neurodegenerative disease, traumatic brain injury, and neuroinflammatory disorders.

Expression of AIF1 is primarily observed in microglia within the central nervous system and in tissue macrophages in peripheral organs. It is minimally expressed in resting neurons and astrocytes, making AIF1 antibody a valuable tool for distinguishing resident immune cells from other neural cell types. Increased IBA1 expression has been documented in Alzheimer disease, Parkinson disease, multiple sclerosis, and glioma, reflecting microglial activation and immune infiltration in these conditions.

Structurally, Allograft inflammatory factor 1 is a small cytoplasmic protein that participates in signaling pathways regulating immune cell activation, proliferation, and migration. Its calcium-dependent actin-binding properties contribute to morphological changes observed during microglial activation. Through its well-established role as a microglial and macrophage marker, AIF1 remains central to research in neuroimmunology and inflammatory disease mechanisms.

For detection of AIF1 as a microglia marker across tissue types, including protein microarray validated performance, see our IBA1 antibody.

Application Notes

Optimal dilution of the AIF1 antibody recombinant rabbit mAb clone 31A74 should be determined by the researcher.

Immunogen

A synthesized peptide derived from human Iba1 was used as the immunogen for the AIF1 antibody recombinant rabbit mAb clone 31A74.

Storage

Store the AIF1 antibody at -20oC.