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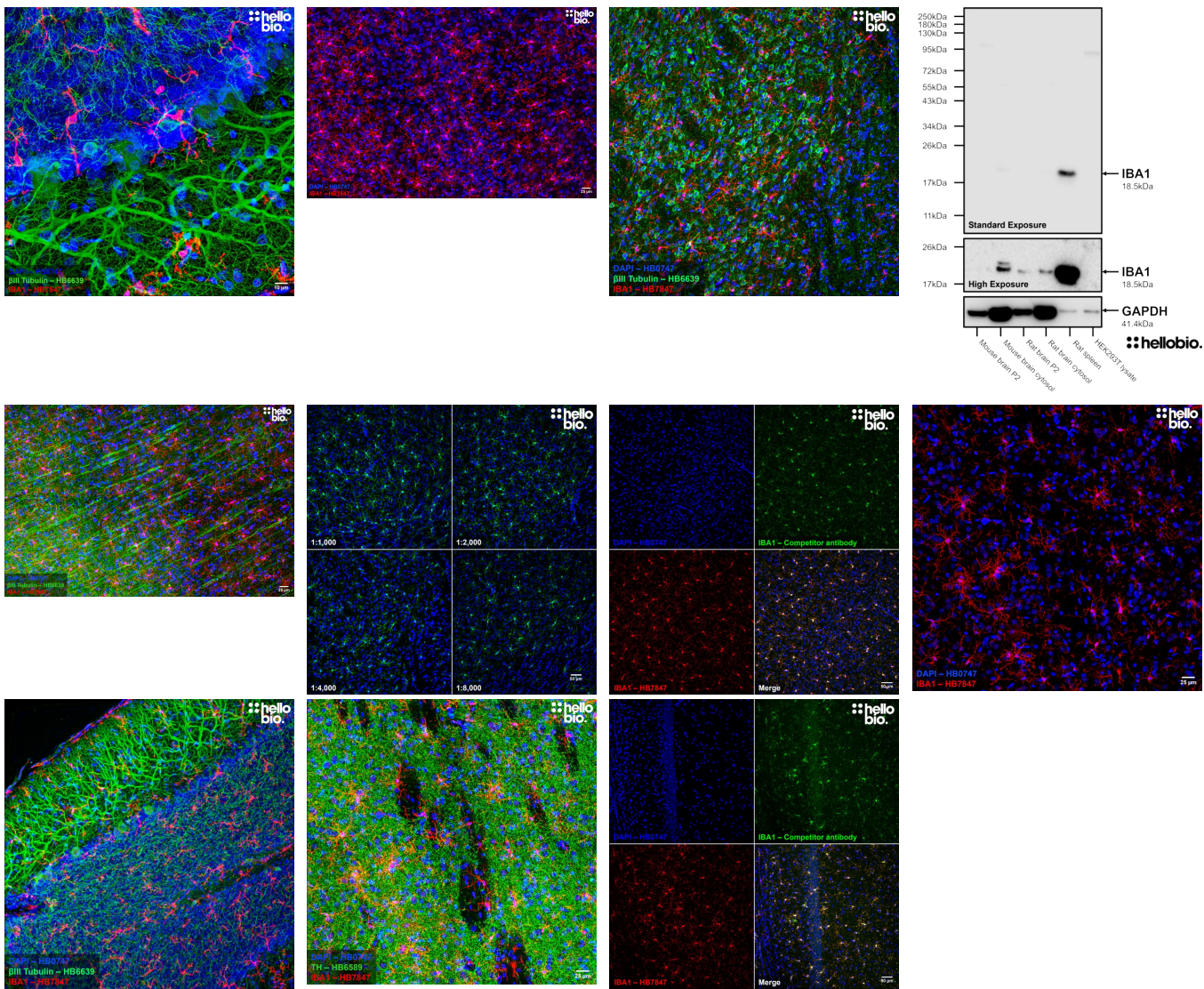
DATASHEET

Anti-IBA1 antibody ValidAb™

Product overview

Name	Anti-IBA1 antibody ValidAb™
Cat No	HB7847
Host	Rabbit
Clonality	Polyclonal
Target	IBA1
Description	Antibody to IBA1 - calcium binding protein widely used as a marker for microglial cells. Part of the ValidAb™ range of highly validated, data-rich antibodies.

Validation data



Product information

Immunogen	C-terminal peptide of human IBA1 coupled to keyhole limpet haemocyanin (KLH)
Purification	Unpurified
Formulation	Serum + 0.03% sodium azide
Predicted species reactivity	Mouse, Rat, Human
Tested species reactivity	Mouse, Rat

Tested applications

Applications	IHC(IF)
IHC(IF) optimal concentration	1:2,000 dilution as tested in free-floating paraformaldehyde fixed rat brain sections
Positive control	IBA1 is widely expressed in microglia across the CNS making brain tissue an excellent positive control. Additionally there is high IBA1 expression in the spleen which is another popular positive control.
Negative control	IBA1 expression is absent in many popular cell lines such as HEK293T and HeLa making them a good negative control.
Open data link	Please follow this link to the OSF .

Target information

Other names	AIF1, Allograft inflammatory factor 1, ionized calcium-binding adapter molecule 1
UniProt ID	P55008
Gene name	AIF1
NCBI full gene name	Allograft inflammatory factor 1
Entrez gene ID	199
Amino acids	147 (16.7kDa)
Isoforms	IBA1 has three known isoforms: <ul style="list-style-type: none">• Isoform 1 (canonical) - 147aa, 16.7kDa• Isoform 2 (G1) - 93aa, 10.5kDa, missing residues 1-54• Isoform 3 - 132aa, 14.6kDa, missing residues 121-147 and difference in sequence between residue 1 and 65.
Expression	Expressed in myeloid lineage cells including microglia within the CNS and circulating macrophages. IBA1 is also expressed in dendritic cells and osteoclasts.
Subcellular expression	Cytosolic
Target function	IBA1 is involved in the activation of macrophages and as part of this has been associated with multiple processes. IBA1 has been found to be involved in the formation of membrane ruffles, F-actin remodelling, regulation of cell cycle progression, and phagocytosis.
Processing	IBA1 has the initiator methionine removed to form an active conformation
Post translational modifications	IBA1 is subject to phosphorylation on residues S2, S38 and S39 in addition to acetylation on K11.

Other names	AIF1, Allograft inflammatory factor 1, ionized calcium-binding adapter molecule 1
Homology (compared to human)	A BLAST search revealed the following homologies: <ul style="list-style-type: none"> • Mouse - 89.1% homology • Rat - 89.8% homology
Similar proteins	A BLAST search identified the following similar proteins to IBA1: <ul style="list-style-type: none"> • AIF2, 66.2% homology • Swiprosin-1, 44.4% homology • Swiprosin-2, 47.1% homology

Storage & Handling	
Storage instructions	-20 °C then use reconstitution advice
Reconstitution advice	<p>Upon receipt store at either -20 °C or -80 °C.</p> <p>For 100µg packs either:</p> <ul style="list-style-type: none"> • Reconstitute with 100µl dH₂O and store at 4 °C • Reconstitute with 50µl dH₂O and 50µl glycerol then store at -20 °C • Reconstitute with 100µl dH₂O, aliquot then snap freeze and store at -80 °C <p>For 25µg packs either:</p> <ul style="list-style-type: none"> • Reconstitute with 25µl dH₂O and store at 4 °C • Reconstitute with 12.5µl dH₂O and 12.5µl glycerol then store at -20 °C • Reconstitute with 25µl dH₂O, aliquot then snap freeze and store at -80 °C <p>For more information read our guide on the best care for your product. Take care when opening as the precipitate is extremely light and can easily be lost if disturbed. When reconstituting make sure that the antibody is thoroughly dissolved by pipetting up and down before giving the antibody a brief spin at 10,000g to make sure that all material is recovered and at the bottom of the tube.</p>
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

References

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Iba1 is an actin-cross-linking protein in macrophages/microglia.

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Altered synaptic connectivity and brain function in mice lacking microglial adapter protein Iba1.

Lituma PJ et al (2021) Proceedings of the National Academy of Sciences of the United States of America 118

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AIF1: Function and Connection with Inflammatory Diseases.

De Leon-Oliva D et al (2023) Biology 12

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