Anti-Y108F-LeuT [2B12] Standard Size Ab00461-1.6

This is a Fab fragment with a his-tag.

This reformatted mouse antibody was made using the variable domain sequences of the original Mouse IgG2a format, for improved compatibility with existing reagents, assays and techniques.

Isotype and Format: Mouse Fab fragment, His-Tagged, Kappa
Clone Number: 2B12
Alternative Name(s) of Target: Bacterial Leucine Transporter
UniProt Accession Number of Target Protein: O67854
Published Application(s): FSEC, WB
Published Species Reactivity: Aquifex aeolicus (strain VF5)
Immunogen: Purified LeuT in detergent.
Specificity:
Application Notes: The antibody binds specifically to LeuT is a bacterial symporter specific for small hydrophobic amino acids such as leucine and alanine, driven by the sodium electrochemical gradient across the membrane. The antibody is specific for the outward-open conformation (substrate-free/ sodium-bound states) of LeuT, which is stabilised by mutating Tyr108 to Phe in TM3 (Y108F_LeuT). The 2B12 antibody was selected to bind to this conformational state by fluorescence-detection size-exclusion chromatography (FSEC) and western Blot. The Fab fragment of the antibody was obtained by papain digestion. LeuT is a bacterial symporter specific for small hydrophobic amino acids such as leucine and alanine, driven by the sodium electrochemical gradient across the membrane. Due to the high homology of LeuT to human neurotransmitter transporters, its crystal structure can reveal the mechanism of action of many drugs, such as antidepressants.
Antibody First Published in: Krishnamurthy et al. X-ray structures of LeuT in substrate-free outward-open and apo inward-open states. Nature. 2012 Jan 9;481(7382):469-74. PMID:22230955
Note on publication: Describes the role of neurotransmitter sodium symporters (NSS) in chemical neurotransmission, and the importance of LeuT, a bacterial NSS homologue, as a structural template. Crystal structures of the outward-open and inward-open states of LeuT, stabilised by the monoclonal antibodies 2B12 and 6A10, are presented.

Product Form

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Size: 200 µg Purified antibody.
Purification: Purified by Immobilized Metal Affinity Chromatography
Supplied In: PBS with 0.02% Proclin 300.
Storage Recommendation: Store at 4ºC for up to 3 months. For longer storage, aliquot and store at -20ºC.
Concentration: 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.

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