

Brain Absorption Kit

TRANSIL Brain Absorption Kit

CATALOG #
AAA60726

PRODUCT SYNONYMS

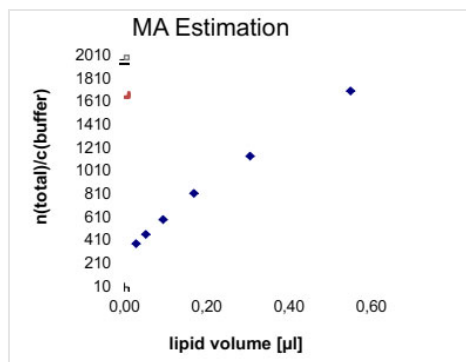
Brain Absorption; TRANSIL Brain Absorption Kit; Brain Absorption kit

PRODUCT SPECIFICATIONS

Preparation and Storage

Store at -20 degree C

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for Brain Absorption kit

Background: Early assessment of drug candidate availability in the Central Nervous System (CNS) is essential for CNS drugs development and useful for optimizing the toxicity profile of non-CNS drugs (Hitchcock & Pennington, 2006; Di et al., 2008). Designing pharmaceutical agents, so that they pass the blood-brain barrier and are freely available to interact with receptors, is one of the great challenges in CNS drug development (Alavijeh et al., 2005). This is because more than 98% of all new candidates do not cross the blood-brain barrier efficiently (Teresaki & Pardridge, 2000). Hence, one of the significant challenges in treating CNS conditions is drug passage across the blood-brain barrier (Pardridge, 1997, Tamai & Tsuji, 2000). However, at least equally important is the extent of brain tissue binding (Maurer et al., 2005; Summerfield et al., 2007). The stronger the binding of the drug candidate to the brain tissue, the lower will be the unbound fraction of the drug that can freely interact with the target receptors. The unbound fraction greatly influences the extent of the free drug concentration in brain which ultimately interacts with the target receptors. Therefore, investigation of drug disposition into brain as well as brain tissue binding will improve efforts in drug discovery.

Principle of the Assay: The principle of the TRANSIL Brain Absorption assay is to assess the affinity of test compounds to brain membranes. The membrane affinity is determined by incubating a fixed concentration of the drug candidate with varying concentrations of membrane surface area immobilized on the silica beads. A total of 8 wells of a tube unit/plate are used to determine the brain membrane affinity for each compound (Figure 1). Six wells contain brain membrane silica beads while two serve as references to account for non-specific binding and contain buffer only. Using the spreadsheet and algorithms supplied with the assay, the affinity to the brain membranes is calculated from remaining free compound concentration in the supernatant of each well with membrane beads. Any of the available detection systems, such as HPLC-UV, LC-MS/MS, scintillation counting, etc. can be used for quantification, as long as it can quantify uM concentrations in volumes of 50 ul or less.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/kits/brain-absorption/60726>