

## Product Information

### Benzodiazepine Receptor, Peripheral, human membrane suspension

Catalog Number **B4938**

Storage Temperature  $-70\text{ }^{\circ}\text{C}$

Synonyms: BZRP, DBI, IBP, TSPO

#### Product Description

Peripheral benzodiazepine receptors are present mainly in the mitochondrial compartment of peripheral tissues. They are a key factor in the flow of cholesterol into mitochondria to permit the initiation of steroid hormone synthesis.

Benzodiazepine Receptor, Peripheral human is a frozen aliquot of membranes from human colon adenocarcinoma cells. Each vial contains 100 units of receptor membrane suspension, at a receptor density of  $\sim 6$  pmoles/mg protein. The membrane suspensions are supplied at a protein concentration of  $\sim 1$  mg/mL in 50 mM Tris-HCl containing 10% sucrose, pH 7.4.

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

#### Storage/Stability

Store the product tightly sealed at  $-70\text{ }^{\circ}\text{C}$ . The receptor remains active for several months when stored at  $-70\text{ }^{\circ}\text{C}$ . Repeated freeze-thaw of this product is not recommended.

#### Procedure

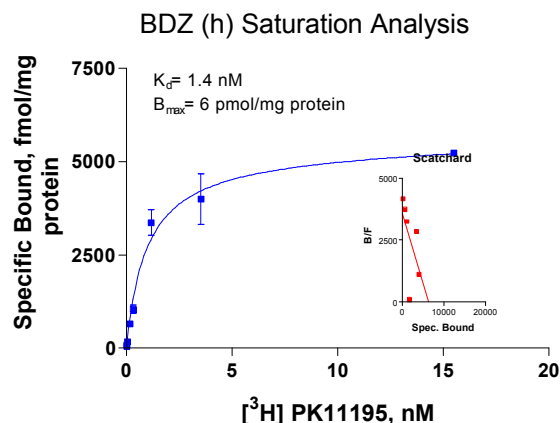
##### Standard Receptor Binding Assay

1. Prepare Assay Buffer – 50 mM Tris-HCl pH 7.4.
2. Thaw product vial quickly and mix with Assay Buffer. Resuspend 100 units of receptor in 20 mL of Assay Buffer. Homogenize and store on ice until addition to assay tubes.
3. Prepare Radioligand Solution – 10 nM [ $^3\text{H}$ ] PK11195.
4. Prepare Unlabeled Ligand Solution – 10  $\mu\text{M}$  PK11195.
5. Prepare the assay volume by combining 200  $\mu\text{L}$  of receptor suspension, 25  $\mu\text{L}$  of Radioligand Solution (1.0 nM final), and 25  $\mu\text{L}$  of Unlabeled Ligand Solution (1.0  $\mu\text{M}$  final).

6. Incubate for 60 minutes at  $25\text{ }^{\circ}\text{C}$ .
7. Use a GF/B grade, glass microfiber filter.
8. Wash the sample 5 times with 50 mM NaCl, 1 mL per tube.
9. Add the assay volume to a 96 well plate. Up to 100 assays may be performed with the solutions prepared.

#### Results

Typical results of Standard Receptor Binding Assay. Results may vary from lot to lot.



#### References

1. Novgorodov, S.A., et al., Long-chain Ceramide Is a Potent Inhibitor of the Mitochondrial Permeability Transition Pore. *J. Biol. Chem.*, **283**, 24707-24717 (2008).
2. Bauer, A., et al., Regional and subtype selective changes of neurotransmitter receptor density in a rat transgenic for the Huntington's disease mutation. *J. Neurochem.*, **94**, 639-650 (2005).
3. Christoforos, G., and Papadopoulos, V., Differential Utilization of the Promoter of Peripheral-Type Benzodiazepine Receptor by Steroidogenic Versus Non-steroidogenic Cell Lines and the Role of Sp1 and Sp3 in the Regulation of Basal Activity. *Endocrinology*, **145**, 1113-1123 (2004).

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