ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Human Benzodiazepine (BNZD) antibodies

□ Cat. # BNZD11-M	**Mouse Monoclonal** Anti-Human BNZD	**SIZE**: 1 mg
□ Cat. # BNZD12-M	**Mouse Monoclonal** Anti-Human BNZD, clone 3	**SIZE**: 1 mg
□ Cat. # BNZD11-C	Human BNZD control protein for Western	**SIZE**: 100 ul

A benzodiazepine is a psychoactive drug whose core chemical structure is the fusion of a benzene ring and a diazepine ring. Benzodiazepines enhance the effect of the neurotransmitter (GABA), resulting in sedative, hypnotic , anxiolytic, anticonvulsant, and muscle relaxant properties. These properties make benzodiazepines useful in treating anxiety, insomnia, agitation, seizures, muscle spasms, alcohol withdrawal and as a premedication for medical or dental procedures. Benzodiazepines are categorized as either short-, intermediate- or long-acting. Short- and intermediate-acting benzodiazepines are preferred for the treatment of insomnia; longer-acting benzodiazepines are recommended for the treatment of anxiety

Benzodiazepines are safe and effective in the short term, although cognitive impairments and paradoxical effects such as aggression or behavioral disinhibition occasionally occur. Long-term use is controversial due to concerns about adverse psychological and physical effects, increased questioning of effectiveness and because benzodiazepines are prone to cause tolerance, physical dependence, and, upon cessation of use after long term use, a withdrawal syndrome.[6][7] Due to adverse effects associated with the long-term use of benzodiazepines, withdrawal from benzodiazepines, in general, leads to improved physical and mental health.

Source of Antigen and Antibodies

Antigen	Highly purified human BNZD protein
Ab Host/type	Mouse, monoclonal IgG (#BNZD11-M) supplied purified IgG
2-ab	**Goat Anti-mouse IgG-HRP conjugate Cat # 40120 (AP, biotin, FITC conjugates also available)**
-ve control IgG	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as –ve control

Purified IgG from murine ascites. Purification: Protein A affinity chromatography (>98%). For Western blot +ve control (**Cat # BNZD11-C**) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of **BNZD11**-C for good visibility with antibody Cat # **BNZD11-M or BNZD12-M**. Store at –20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should re dissolved by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the **BNZD11**-C solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly.

All human derived material has been tested negative for HIV, HCV, and HbSAg. Nevertheless, all precautions should be taken and samples be treated as potentially hazardous.

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG
□ 100 ug/100ul □ solution □ lyophilized powder
Supplied in **Buffer**: PBS+0.05% azide
Reconstitute powder in PBS at 1mg/ml

Storage

Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.
Shipping: 4oC for solutions and room temp for powder

Recommended Usage

Western Blotting (1:500-:1:2K) using ECL technique.

ELISA: Control peptide/protein can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (1:10-50K for neat serum and 0.5-1 ug/ml for affinity pure).

Histochemistry & Immunofluorescence: Not tested. We recommend the use of affinity purified antibody at 2-20 ug/ml in paraformaldehyde fixed sections of tissues.

Specificity & Cross-reactivity

The antibodies are specific for human BNZD with no reactivity to other serum proteins. Antibody cross-reactivity in various species has not been studied. The BNZD11-C control protein can be used for western or #BNZD16-N for ELISA.

References:

Page C (2002) Integrated Pharmacology (2nd ed.). Shorter E (2005). Oxford University Press. pp. 41–2. Olkkola KT,(2008). Handbook of Experimental Pharmacology 182: 335–60. Dikeos DG, (2008).

*This product is for In vitro research use only.

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