

## **A-2002-1: Mouse Anti-Tetracycline Repressor Monoclonal Antibody Clone Tc14**

<b>Product Name:</b>	Mouse Anti-Tetracycline Repressor Monoclonal Antibody Clone Tc14
<b>Catalogue No:</b>	A-2002-1
<b>Immunogen:</b>	Tetracycline repressor (TetR) in complex with tetracycline (Tc) (TetR-Tc)
<b>Source/Host:</b>	Mice
<b>Purity/Purification:</b>	Affinity purified through a Protein A/Protein G-agarose column
<b>Clone:</b>	Monoclonal, Clone Tc14
<b>Antibody Class:</b>	IgG (kappa light chain)
<b>Species reactivity:</b>	Specific to tetracycline repressor (TetR) with high affinity to TetR in complex with Tc (TetR-Tc) (Ref 1)
<b>Form:</b>	Liquid
<b>Concentration:</b>	1.0 mg/ml (in 20 mM sodium phosphate pH7.4/0.15 M NaCl/0.02% sodium azide). Protein concentration is determined by UV absorbance method.
<b>Size:</b>	0.2 mg or 1.0 mg
<b>Storage:</b>	Keep at -20°C for up to 1 year and at 4°C for 3 months. Avoid repeated freeze-and-thaw.
<b>Applications:</b>	Competitive ELISA and immunoprecipitation. A key feature of this monoclonal antibody is its high affinity to TetR-Tc complex but not to free TetR or TetR in complex with the <i>tet</i> operator ( <i>tetO</i> ) (TetR- <i>tetO</i> ); its binding affinity to TetR- <i>tetO</i> is significantly lower than to free TetR (Ref 1).
<b>Shipping:</b>	May be shipped with ice packs or dry ice.

**Brief description about the mouse anti-tetracycline repressor monoclonal antibody clone Tc14:**

This monoclonal antibody was generated from mice immunized with recombinant wild-type tetracycline repressor (catalog #: P-1002) in complex with tetracycline (Tc) (TetR-Tc). It has higher antigen-binding ability to tetracycline repressor in complex with tetracycline (TetR-Tc) as demonstrated by ELISA, western blot and immunoprecipitation (Ref 1) and immune-gold based lateral flow assay. The order of its binding affinity from the high to low is ranked TetR-Tc > free TetR > TetR-*tetO*. This mnab does not bind to certain mutant TetRs (e.g., DG178) of free form; however its binding affinity is significantly stronger to the same mutant TetR in complex with Tc (e.g., TetR/DG178-Tc complex), which is even higher than that to the wild-type TetR-Tc (Ref. 1). This mnab appears to recognize conformational epitope(s) on free TetR, TetR-Tc and TetR-*tetO* (Ref. 1).

This antibody can be used as a detecting reagent in assays designed to quantitatively or semi-quantitatively measure Tc, or to detect the presence of *tetO*, such as competitive ELISA, or immunoprecipitation in association with wild-type or mutant TetR.

The optimal working dilutions for each specific application should be determined by the user empirically. We recommend start with 1:1000 for ELISA and 1:100 for western blot, or immunoprecipitation.

Ref 1: Pook E., et al. Affinities of mAbs to Tet repressor complexed with operator or tetracycline suggest conformational changes associated with induction Eur. J., Biochem. 158: 915-922, 1998.

(Produced by Imgen BioSciences, Inc., May, 2012)