CTX-M (C11) rabbit mAb

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For Research Use Only. Not For Use In Diagnostic Procedures.

Applications	Detection	Clonality	Isotype
ELISA	Anti-Rabbit IgG	Monoclonal	Rabbit IgGk

Format: Unconjugated

Cross Reactivity: Almost all CTX-M antigen. (CTX-M2, M14, M15)

Formulation: 1X PBS, 0.02% NaN3

Preparation: Protein A

Reactivity: E. coli Klebsiella pneumoniae

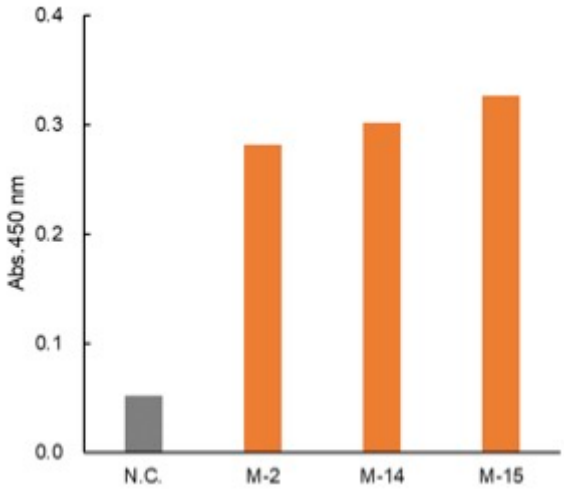
Recommended Usage: ELISA 1:1000 Western Blotting 1:1000 Flow not recommended

Immunogen: recombinant CTX-M antigen

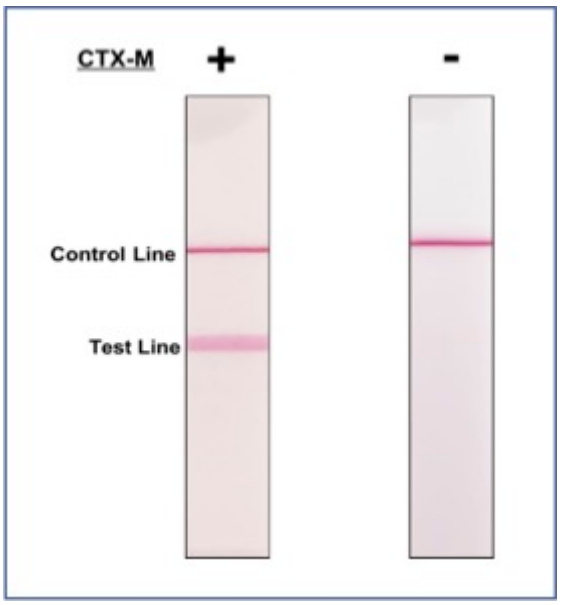
Description: CTX-M-type enzymes are a group of class A extended-spectrum beta-lactamases (ESBLs) that are rapidly spreading among Entrobacteriaeae worldwide (1). CTX-M-type β-lactamases, originally found in Kluyvera spp., shows hydrolysis activity on ceflaxime and its gene spreads via plasmid. Since their discovery in Europe in the early 1980s, they have spread worldwide and are now endemic in Enterobacterales isolated from both hospital-associated and community-acquired infections, including urinary tract infections and bloodstream infections (2). Especially, poor sanitary conditions are more likely to result in the transfer of CTX-M-type enzymes in the Enterobacterales between animals, humans, and living environment. As a result, they are a global public health concern. In the past, TEM- and SHV-type ESBLs were the predominant families of ESBLs. CTX-M-type enzymes have increased since 2000, and today the most commonly found ESBL type with the CTX-M-15 variant dominating worldwide, followed in prevalence CTX-M-14, and CTX-M-27 is emerging in certain parts of the world (3). Presently, more than 50 allelic variants are known, clustered in six sub-lineages or groups.

References:

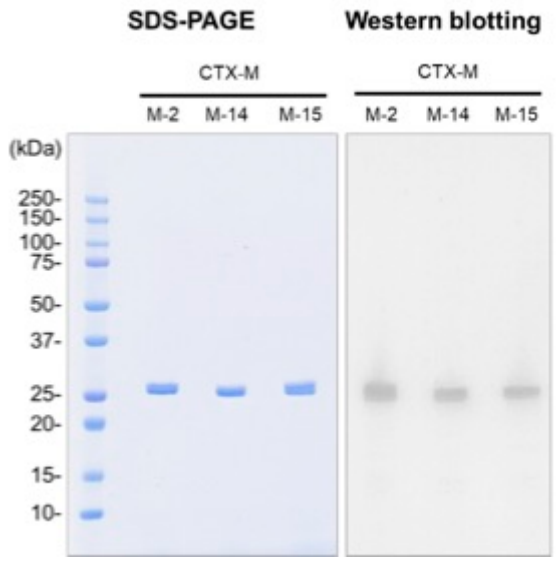
1. Castanheira M et al., 2021, JAC Antimicrob Resis 3(3): diab092.
2. Bonet R, 2004, Antimicrob Agents Chemotherm 48:1-14.
3. Bevan ER., et al., 2017, J Antimicrob Chemother, 72:2145-2155.
4. Nishida, S et al., 2021, Int J Biol Macromol. 185 317-323.



ELISA of recombinant CTX-M subtypes (M-14, M-2, M-15) produced by Escherichia coli with anti-CTX-M (C11) rabbit mAb (Cat. 2626). ELISA of recombinant CTX-M subtypes (M-14, M-2, M-15) produced by Escherichia coli with anti-CTX-M (C11) rabbit mAb (Cat. 2626). This rabbit mAb can recognize multiple CTX-M subtypes.



Detection of CTX-M protein by lateral flow immunoassay using colloidal gold conjugated anti-CTX-M (C11) rabbit mAb (Cat. 2626) and goat polyclonal antibody with multiple antigen recognition. The recombinant CTX-M 14 protein produced by E coli was used as standard antigen. Its limit of detection was 0.8 ng/mL.



Western blot analysis of recombinant CTX-M subtypes with anti-CTX-M (C11) rabbit mAb at 0.1 □g/mL (Cat. 2626. HRP-conjugated goat anti rabbit antibody was used as the secondary antibody. Cross-reactivity of the antibody was confirmed by the colorimetric method using TMB. The recombinant CTX-M 2, M14, and M15 protein produced by E. coli was used for analysis.