



# Rabbit Anti-poly-QAGR polyclonal antibody (CABT-RM115)

This product is for research use only and is not intended for diagnostic use.

## PRODUCT INFORMATION

<b>Specificity</b>	Specifically detects proteins with poly-(QAGR).
<b>Target</b>	poly-QAGR
<b>Immunogen</b>	A synthetic peptide corresponding to the (QAGR)EXP repeat motif.
<b>Isotype</b>	IgG
<b>Source/Host</b>	Rabbit
<b>Species Reactivity</b>	Human
<b>Purification</b>	Unpurified
<b>Conjugate</b>	unconjugated
<b>Applications</b>	IHC, IF, WB
<b>Molecular Weight</b>	~26 kDa observed. Uncharacterized bands may be observed in some lysate(s).
<b>Format</b>	Liquid
<b>Size</b>	100 µl
<b>Buffer</b>	Rabbit polyclonal antiserum
<b>Preservative</b>	0.05% sodium azide
<b>Storage</b>	Stable for 1 year at -20°C from date of receipt. Handling Recommendations: Upon receipt and prior to removing the cap, centrifuge the vial and gently mix the solution. Aliquot into microcentrifuge tubes and store at -20°C. Avoid repeated freeze/thaw cycles, which may

## BACKGROUND

### Introduction

RAN, a small GTP binding protein, belonging to the RAS superfamily is involved in the translocation of RNA and proteins through the nuclear pore complex and participate in the control of DNA synthesis and cell cycle progression. Antisense QAGR (Gln-Ala-Gly-Arg ) RAN proteins that are localized primarily in the nucleus of oligodendrocytes are reported to accumulate within the white matter region of the brain. They are detectable in frontal cortex, basal ganglia, and hippocampus in subjects with myotonic dystrophy type 2 (DM2) but are not detected in normal control brain tissue. QAGR proteins are known to be toxic to cells independent of RNA effects. QAGR RAN proteins also accumulate in regions of brain that display certain neuropathological changes. These include regions with accumulation of activated microglia, increased astrocytes, and white matter rarefaction. Studies have shown that the tetranucleotide DM2 CAGG expansion mutation is bidirectionally transcribed and the resulting RNAs are RAN translated and produce tetrapeptide expansion proteins with QAGR repeats from the antisense strand, which accumulate in brains from DM2 subjects.

### Keywords

Gln-Ala-Gly-Arg; QAGR; QAGR RAN protein; tetrapeptide RAN protein; RAN protein

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