

## Anti-DNA/RNA G-quadruplex [BG4] Standard Size Ab00174-1.6

This is a Fab fragment with a his-tag.

This chimeric mouse antibody Fab-fragment was made using the variable domain sequences of the original Human scFv format, for improved compatibility with existing reagents, assays and techniques. It does not have a FLAG-tag, but a His-tag, which may be used for detection. Alternatively, secondary antibodies raised against murine Fab-fragments, or murine lambda light-chain can be used.

**Isotype and Format:** Mouse Fab fragment, His-Tagged, Lambda

**Clone Number:** BG4

**Alternative Name(s) of Target:** G4 quadruplex

**UniProt Accession Number of Target Protein:** n/a

**Published Application(s):** EMSA, ELISA, IF

**Published Species Reactivity:** Human

**Immunogen:** DNA/RNA G-quadruplex.

**Specificity:** Binds with high selectivity and low nanomolar affinity to DNA and RNA G-quadruplex structures.

**Application Notes:** This antibody has been shown (by ELISA) to bind selectively to G-quadruplex forming DNA and RNA structures. Please that Fab-based versions as well as scFvs, with and without Flag-tag are available, which needs to be considered when replicating published methods. Tsai et al. (2022 et al. PMID: 36440760), report similar activity between whole-antibody and scFv-based versions of BG4. Weldon et al. (2016, PMID: 27820800) used Ab00174-1.1 to identify G-quadruplexes in long functional RNAs using an electrophoretic mobility shift assay (EMSA). The mouse IgG1 version of BG4 was shown to have weak cross-reactivity with iMotif structures (2018, PMID: 29686376). iMotif structures can be detected selectively using our anti-iMotif antibody Ab01462.

**Antibody First Published in:** Biffi G, Tannahill D, McCafferty J, Balasubramanian S. Quantitative visualization of DNA G-quadruplex structures in human cells. Nat Chem. 2013 Mar;5(3):182-6.

[PMID:23422559](#)

**Note on publication:** Describes generation of a G-quadruplex-specific antibody using phage display and the in vitro selection (using ELISA and CD) of a structure-specific antibody probe that binds with high

selectivity and low nanomolar affinity to DNA G-quadruplex structures called BG4.

## Product Form

**Size:** 100 µg Purified antibody.

**Purification:** Purified by Immobilized Metal Affinity Chromatography

**Supplied In:** PBS with 0.02% Proclin 300.

**Storage Recommendation:** Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.

**Concentration:** 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.