

## Anti-Sigma1 [9BG5] Bulk Size Ab00927-10.3-BT

This antibody was created using our proprietary Fc Silent™ engineered Fc domain containing key point mutations that abrogate binding to Fc gamma receptors.

This chimeric human antibody was made using the variable domain sequences of the original Mouse IgG2a format, for improved compatibility with existing reagents, assays and techniques.

**Isotype and Format:** Human IgG1, Fc Silent™, Kappa

**Clone Number:** 9BG5

**Alternative Name(s) of Target:** T3D HA; Outer capsid protein sigma1; sigma1 protein; Reovirus strain T3D sigma 1; strain T3D S1; T3D S1; type 3 haemagglutinin; type 3 HA

**UniProt Accession Number of Target Protein:** P03528

**Published Application(s):** crystallisation, IP, RIA, FC

**Published Species Reactivity:** Reovirus strain T3D

**Immunogen:** Murine antibodies were produced by immunising BALB/c mice with an injection of strain TD3 reovirus. Splenocytes from immunised mice were obtained and fused with the NS1 mouse myeloma cell line to generate a hybridoma.

**Specificity:** 9BG5 was identified as a clone which significantly neutralised the strain T3D reovirus Sigma1 as assayed using viral titre of infection (Burstin et al, 1982). 9BG5 was able to immunoprecipitate strain T3D Sigma1, however some cross-reactivity was observed with strain T1L reoviral Sigma1 (Burstin et al, 1982; Dietrich et al, 2017). Recently, the interaction between 9BG5 and strain T3D reoviral Sigma1 was shown crystallographically (Dietrich et al, 2017). 9BG5 binds to the Sigma1 head region, with 5 CDRs contacting a relatively flat, contiguous epitope.

**Application Notes:** 9BG5 effectively neutralised reovirus strain T3D activity, and showed some inhibition of erythrocyte haemagglutination in virus-erythrocyte suspensions (Burstin et al, 1982). 9BG5 was also used to immunoprecipitate radiolabelled viral Sigma1 from L929 mouse fibroblast supernatants. More recently, 9BG5 was shown to cross-react with Sigma1 from the reovirus strain T1L, and contributed to blocking adherence of both T1L and T3D virions to CHO cells shown by flow cytometry (Dietrich et al, 2017).

**Antibody First Published in:** Burstin et al. Evidence for functional domains on the reovirus type 3 hemagglutinin. *Virology*. 1982 Feb;117(1):146-55. [PMID:6175082](#)

**Note on publication:** Describes the generation of a panel of anti-reovirus (strain T3D) mAbs using generated murine hybridomas which recognised different functional epitopes of the viral Sigma1 protein.

## Product Form

**Size:** 1 mg Purified antibody in bulk size.

**Purification:** Protein A affinity purified

**Supplied In:** PBS only.

**Storage Recommendation:** Store at 4°C for up to 3 months. Note, this antibody is provided without added preservatives, it is therefore recommended this antibody be handled under sterile conditions. 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.