



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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## Anti-CXCL12 [30D8] Bulk Size Ab04215-23.0-BT

**Isotype and Format:** Rabbit IgG, Kappa

**Clone Number:** 30D8

**Alternative Name(s) of Target:** SDF1; SDF-1; Stromal cell-Derived Factor 1; C-X-C motif chemokine 12; C-X-C motif chemokine ligand 12; IRH; PBSF; SCYB12; TLSF; TPAR1; CXCL12 $\alpha$ ; CXCL12 $\beta$ ; CXCL12 $\gamma$

**UniProt Accession Number of Target Protein:**

**Published Application(s):** BLI, Blocking, crystallization, in vitro, in vivo, ELISA

**Published Species Reactivity:** Rat, Human, Cynomolgus Monkey, Mouse

**Immunogen:** The original antibody was generated by hyperimmunization of Armenian hamsters with recombinant human CXCL12 $\alpha$ .

**Specificity:** This antibody is specific for CXCL12. In mouse and human, it has been shown to bind CXCL12 $\alpha$ , CXCL12 $\beta$ , and CXCL12 $\gamma$ .

**Application Notes:** The original format of this antibody (Hamster IgG,  $\kappa$ ) completely blocked chemotaxis of Jurkat cells elicited by CXCL12 $\alpha$  with an average  $IC_{50}$  of approximately 0.5  $\mu\text{g}/\text{mL}$  ( $\sim 3$  nmol/L). This antibody successfully and specifically blocked CXCL12 $\alpha$  binding to CXCR4 and CXCR7, inhibited CXCL12 $\alpha$ -induced Rac1 activation in a dose-dependent manner, and effectively suppressed primary tumor growth in mouse lymphoma and Lewis lung carcinoma models. Additionally, 30D8 showed significant inhibition of lung metastasis in a breast cancer model and reduced choroidal neovascularization in a mouse model. In a collagen-induced arthritis mouse model, 30D8 slowed down disease progression and, in combination with anti-TNF antibody, prevented disease advancement, reducing bone-erosive changes. The humanized version of this antibody (hu30D8) demonstrated binding affinity not only to CXCL12 $\alpha$  but also to CXCL12 $\beta$  and CXCL12 $\gamma$  in direct ELISA assays. It effectively blocked CXCL12 $\alpha$ - and CXCL12 $\beta$ -induced migration of Jurkat cells, displaying an  $IC_{50}$  of 0.16  $\mu\text{g}/\text{mL}$  ( $\sim 1$  nmol/L), comparable to its hamster and mouse/hamster chimeric counterparts. Although the exact affinity for binding to hu30D8 could not be reliably determined due to technical limitations, the dissociation constant (KD) was measured as 0.923 and 2.39 nmol/L for human and mouse CXCL12, respectively, using Biolayer Interferometry. The crystal structure of hu30D8 Fab in complex with human CXCL12 $\alpha$  was determined. The pharmacokinetic characteristics of 30D8 and hu30D8 were extensively studied. Both formats displayed rapid clearance following administration, with distinct behaviors in different animal models. 30D8, administered intraperitoneally, exhibited fast clearance in mice yet showed no significant accumulation during prolonged dosing, suggesting consistent clearance over time. Hu30D8, when given intravenously, exhibited rapid clearance in mice but had normal clearance in rats, indicating species-specific differences. Various mutations and epitope interactions were explored: hu30D8D95A, which disrupted a crucial interaction, exhibited significantly slower clearance, emphasizing

the impact of epitope interactions on clearance rates (Zhong et al., 2013; PMID: 23812669). The humanized version of this antibody is available on request. Please [contact us](#) if interested.

**Antibody First Published in:** Zhong et al. Development and preclinical characterization of a humanized antibody targeting CXCL12 Clin Cancer Res. 2013 Aug 15;19(16):4433-45. doi: 10.1158/1078-0432.CCR-13-0943. Epub 2013 Jun 28 [PMID:23812669](#)

**Note on publication:** The original publication describes the development and preclinical characterization of a potent humanized antibody, hu30D8, targeting mouse/human CXCL12, demonstrating its efficacy in blocking CXCL12 binding to CXCR4 and CXCR7, inhibiting tumor growth, metastasis, arthritis, and choroidal neovascularization in mouse models, indicating its potential for cancer and inflammation-related disease treatments.

## 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.