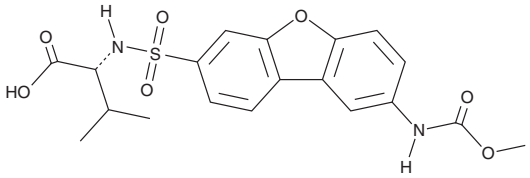
PRODUCT INFORMATION

MMP408

Item No. 46116

CAS Registry No.:	1258003-93-8
Formal Name:	N-[[8-[(methoxycarbonyl)amino]-3-dibenzofuranyl]sulfonyl]-D-valine
MF:	$C_{19}H_{20}N_2O_7S$
FW:	420.4
Purity:	≥98%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

MMP408 is supplied as a solid. A stock solution may be made by dissolving the MMP408 in the solvent of choice, which should be purged with an inert gas. MMP408 is sparingly soluble (1-10 mg/ml) in DMSO and acetonitrile:water (1:1).

Description

MMP408 is an inhibitor of matrix metalloproteinase-12 (MMP-12; IC_{50} = 2 nM).[1] It is selective for MMP-12 over MMP-3, -9, -13, and -14 (IC_{50}s = 351, 1,300, 120, and 1,100 nM, respectively) and MMP-1, MMP-7, and disintegrin and metalloproteinase domain-containing protein 17 (ADAM17/TACE; IC_{50}s = >6, >22, and >25 µM, respectively). MMP408 (1 µM) inhibits the proliferation, colony formation, and migration of primary human adamantinomatous craniopharyngioma (ACP) cells.[2] MMP408 decreases MMP-12 levels, macrophage and lymphocyte bronchoalveolar lavage fluid (BALF) infiltration, and airway hyperresponsiveness in mouse models of respiratory syncytial virus (RSV) infection.[3] It decreases ocular collagen-positive lesion size and macrophage accumulation in a mouse model of subretinal fibrosis at 5 mg/kg.[4]

References

1. Li, W., Li, J., Wu, Y., *et al.* A selective matrix metalloprotease 12 inhibitor for potential treatment of chronic obstructive pulmonary disease (COPD): Discovery of (*S*)-2-(8-(methoxycarbonylamino)dibenzo[*b*,*d*]furan-3-sulfonamido)-3-methylbutanoic acid (MMP408). *J. Med. Chem.* **52(7)**, 1799-1802 (2009).
2. Li, M., Zhou, L., Li, S., *et al.* MMP12 is a potential therapeutic target for adamantinomatous craniopharyngioma: Conclusions from bioinformatics analysis and *in vitro* experiments. *Oncol. Lett.* **22(1)**, 536 (2021).
3. Long, X., Li, S., Xie, J., *et al.* MMP-12-mediated by SARM-TRIF signaling pathway contributes to IFN-γ-independent airway inflammation and AHR post RSV infection in nude mice. *Respir. Res.* **16(1)**, 11 (2015).
4. Yi, C., Liu, J., Deng, W., *et al.* Macrophage elastase (MMP12) critically contributes to the development of subretinal fibrosis. *J. Neuroinflammation* **19(1)**, 78 (2022).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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