



## JBScreen XP

Crystallization Screen optimized for use with TEW

Cat. No.	Amount
CS-350	96 solutions (1,7 ml each)

**For general laboratory use.**

**Shipping:** shipped at ambient temperature

**Storage Conditions:** store at 8-10 °C

**Shelf Life:** 12 months

### Description:

JBScreen XP contains TEW-optimized JBScreen Basics conditions: 96 of the most prominent crystallization conditions optimized for TEW as "glue" for protein molecules.

The additive Anderson-Evans polyoxotungstate (TEW) [TeW<sub>6</sub>O<sub>24</sub>]<sup>6-</sup> has been shown to promote crystal contacts, improve crystal quality, and provide a valuable anomalous signal for phase determination due to its 6 tungsten atoms. It has successfully induced protein crystallization even at low concentrations of 1 mM. However, our own experiments have shown that a higher concentration of 5 or 10 mM TEW can significantly increase crystallizability even further.

The Anderson-Evans polyoxotungstate (TEW), 20 mg, Cat.-No. X-TEW-20 is available separately.

### Content:

96 screening solutions x 1.7 ml each, optimized for high TEW concentrations

The exact composition of each buffer is listed under the links "Screen Formulation".

All solutions are sterile filtered (0.2 µm), filled under sterile conditions and contain 0.1% ProClin<sup>TM</sup> 950 as preservative to prevent the growth of microbes. (ProClin is a trademark of LANXESS Corp.)

### Selected Literature Citations of XP Screen

- Sobala *et al.* (2020) Structure of human endo- $\alpha$ -1,2-mannosidase (MANEA), an antiviral host-glycosylation target. *PNAS* **117** (47):29595.
- Ames *et al.* (2020) Identifying a Molecular Mechanism That Imparts Species-Specific Toxicity to YoeB Toxins. *Front Microbiol* **11**:959.

### Related Products:

XP Up Screen, #CS-351

Anderson-Evans polyoxotungstate (TEW), #X-TEW-20

### Selected References:

- Bijelic *et al.* (2017) Ten Good Reasons for the Use of the Tellurium-Centered Anderson-Evans Polyoxotungstate in Protein Crystallography. *Acc. Chem. Res.* **50**:1441.
- Molitor *et al.* (2016) Aurone synthase is a catechol oxidase with hydroxylase activity and provides insights into the mechanism of plant polyphenol oxidases. *Proc. Natl. Acad. Sci.* **113**:E1806.
- Molitor *et al.* (2016) *In situ* formation of the first proteinogenically functionalized [TeW<sub>6</sub>O<sub>24</sub>O<sub>2</sub>(Glu)]<sup>7-</sup> structure reveals unprecedented chemical and geometrical features of the Anderson-type cluster. *Chem. Commun.* **52**:12286.
- Molitor *et al.* (2015) Crystallization and preliminary crystallographic analysis of latent, active and recombinantly expressed aurone synthase, a polyphenol oxidase, from *Coreopsis grandiflora*. *Acta Cryst. F* **71**:746.
- Bijelic *et al.* (2015) Hen Egg-White Lysozyme Crystallisation: Protein Stacking and Structure Stability Enhanced by a Tellurium(VI)-Centred Polyoxotungstate.



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*ChemBioChem* **16**:233.

[6] Mauracher *et al.* (2014) Latent and active *ab*PP<sub>04</sub> mushroom tyrosinase cocrystallized with hexatungstotellurate(VI) in a single crystal. *Acta Cryst. D* **70**:2301.

[7] Mauracher *et al.* (2014) Crystallization and preliminary X-ray crystallographic analysis of latent isoform PPO<sub>4</sub> mushroom (*Agaricus bisporus*) tyrosinase. *Acta Cryst. F* **70**:263.